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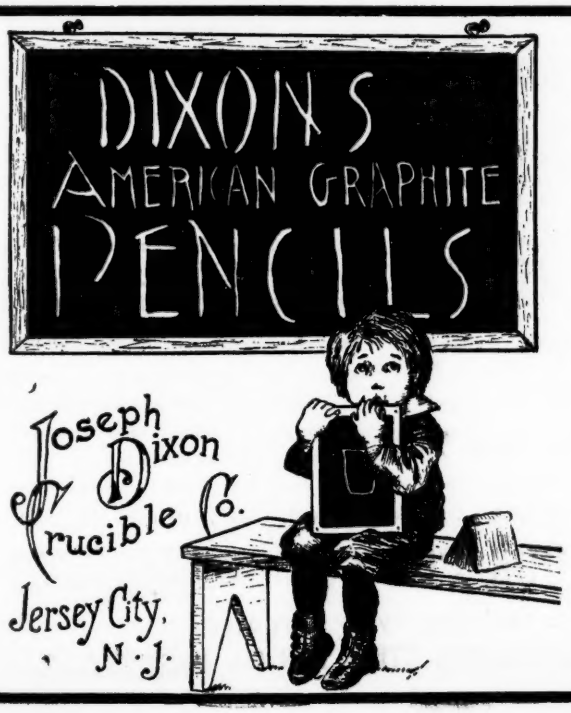

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Length of the Baccalaureate Course and Preparation for the Professional Schools.

By Pres. Nicholas Murray Butler, of Columbia University.

[Abstract.—Department of Higher Education.]

In my judgment, most participants in the discussion now going on thruout the land as to the length of the baccalaureate course and the preparation for the professional schools, err in supposing that the two questions are necessarily reducible to one and also in taking hold of that one by the wrong end. The nature, content, and proper length of the baccalaureate course are matters quite independent of the proper standards of professional education and are entitled to consideration on their own merits.

The one question to which the two are usually reduced is taken hold by the wrong end when it is said that the baccalaureate course should be of a stated length, say, four years or three years, and that everything else in education and in life must adapt itself accordingly. Those who take this stand give us no clear notion of (1) where the baccalaureate course begins, (2) what it consists of, or (3) what it exists for. They assume that all of these points are clearly understood and generally agreed upon. Nothing could be farther from the truth. Not even the so-called reputable colleges are in anything approaching agreement as to the standard to be enforced for admission to the baccalaureate course, and, while there is an external pretense of unanimity as to what the baccalaureate course exists for, that course is, nevertheless, in too many instances, fearfully and wonderfully made. Dr. Wayland said, over sixty years ago, that "there is nothing magical or imperative in the term of four years, nor has it any natural relation to a course of study. It was adopted as a matter of accident, and can have, by itself, no important bearing on the subject in hand." To suppose that a four years' baccalaureate course is necessary *semper, ubique, ab omnibus* is to elevate an accident to the plane of a principle.

Others take hold of the question by the middle. They fix an arbitrary age at which professionally trained men should be ready for active work in life, and, after subtracting the sum of the years that they propose to allot to the elementary school, the secondary school, and the professional school, the remaining years, three, or perhaps two, are held to be sufficient for the college.

Both of these methods appear to me to be arbitrary and unscientific, altho the former is the usual academic mode of settling the question and has behind it the support of uncritical public opinion.

One of the worst of all educational evils is that of quantitative standards, and it persists surprisingly in the discussion of college and university problems. Every higher course of study that I know of, except only that of graduate work leading to the degree of doctor of philosophy at the best universities, is primarily quantitative. These courses are all based on time spent, not upon performance. The adjustment of the period of work to the capacity of individual students, now so common in elementary schools and not unusual in secondary schools, is almost wholly absent from the colleges. The "lock-step" is seen there to perfection, and class after class of one hundred, or even two hundred members, moves forward (with the exception of a few delinquents) as if all its members were cast in a common mold. The place of the baccalaureate course and its standards will never be established on sound principles until the question of its length is made subordinate to those relating to its content and its purpose. Moreover, it is quite unreasonable to assume that the baccalaureate course should be of one and the same length for everybody. By the term "baccalaureate course" I mean those liberal studies in the arts and sciences that follow the secondary school period.

My own views on the questions at issue are, briefly, these:

1. The baccalaureate or college course of study of the liberal arts and sciences should be preserved at all hazards as an essential part of our educational organization. It is distinctively American and a very powerful factor in the upbuilding of the nation's culture and idealism. It should be treated as a thing of value in and for itself, and not merely as an incident to graduate study or to professional schools.

2. The college course is in serious danger by reason of the fact that the secondary school is reaching up into its domain on the one hand, and the professional school is reaching down into it on the other. Purely professional subjects in law, medicine, engineering, and architecture are widely accepted as part of the baccalaureate or college course by university colleges, and now independent colleges in different parts of the country are trying various devices with a view to doing the same thing. If this tendency continues unchecked at many institutions there will soon be little left of the old baccalaureate course but the name.

3. To preserve the college is (a) to fix and enforce a standard of admission which can be met normally by a combined elementary and secondary school course of not more than ten years well spent, and (b) to keep out of the baccalaureate course purely professional subjects pursued for professional ends by professional methods. The college course, in other words, should be constructed for itself alone and for the intellectual, moral, and spiritual needs of the youth of our time, without reference or regard to specific careers. This course must be widely elective, and so offer material to enrich and develop minds of every type. This course is the best preparation for the professional study of law, medicine, divinity, engineering, architecture, and teaching, simply because it does what it does for the human mind and the human character, and not because it is so hammered and beaten as to serve as a conduit to a particular career or careers.

4. This course should be entered upon at seventeen, or, in some cases, at sixteen. Eighteen is too late for the normal boy; the boy who has had every educational advantage and is not ready to meet any existing college entrance test at eighteen has been dawdling and weakening his mental powers by keeping them too long in contact with merely elementary studies.

5. For the boy who enters college at seventeen and who looks forward to a career as scholar, as teacher, or

as man of affairs, four years is, ordinarily, not too long a time to spend in liberal studies. On the other hand, the boy who, entering college at seventeen, proposes to take up later the study of a profession in a university, ought not to be compelled to spend four years upon liberal studies just at that time in his life. To compel him to do so is to advance the standard of professional education arbitrarily without in any way raising it. It is a fallacy to suppose that the more time a boy spends in study the more he knows and the more he grows. Whether he grows by study depends entirely upon whether he is studying subjects adapted to his needs, his interests, and his powers. Pedagogs suppose that the more time a boy spends in school and college the better; educators know the contrary. There is a time to leave off as well as a time to begin. A boy *can* develop intellectual apathy in college as well as knowledge, weakness of will as well as strength of character.

6. The earlier parts of professional courses in law, medicine, engineering, and the like are most excellent material for the boy of nineteen or twenty. He should begin them at that time and complete his four years of professional study by twenty-three or twenty-four. To postpone his professional course later than this is not only to waste his time, but to waste his mind, which is far worse.

7. There should be a college course two years in length, carefully constructed as a thing by itself and not merely the first part of a three years' or a four years' course, which will enable intending professional students to spend this time as advantageously as possible in purely liberal studies. The university colleges can establish such a course readily enough; the independent colleges will have to establish such a course or see their influence and prestige steadily decline. To try to meet the new situation by simply reproducing all present conditions on a three-year scale instead of on a four-year scale is a case of *solvitur ambulando*. The shortening of the college to three years for all students involves an unnecessary sacrifice. As usually defended this policy involves no educational principle, but merely concedes a year of liberal study to the modern demand for haste and hurry.

8. Whether the completion of such a two-year course should be crowned with a degree is to me a matter of indifference. Degrees are the tinsel of higher education and not its reality. Such a two-year course as I have in mind would imply a standard of attainment at least as high as that required for the degree of A.B. in 1860, which had many characteristics that we of to-day persistently undervalue. If this discussion could be diverted from degrees to real educational standards it would be a great gain. The compromise plan as to degrees, now becoming so popular, whereby the baccalaureate degree is given, either for two years of college study and two years of work in a professional school, or for three years of college study and one year of work in a professional school, is disastrous to the integrity of the college course. It deliberately shortens the college course by one year or two while proclaiming a four-year college course. It is a policy that only university colleges can adopt; independent colleges must suffer if it becomes a fixed and permanent policy.

9. The most difficult point to establish, apparently, is that at which the baccalaureate course should begin. Colleges with courses nominally four years in length are admitting students with from one to two years' less preparation than is demanded by other colleges with four-year courses. The lax enforcement of published requirements for admission, together with the very general acceptance of certificates from uninspected and unvisited schools, has demoralized college standards very generally. It does not make much difference how long the baccalaureate course is if it does not begin anywhere.

10. A university ought not to admit to its professional schools students who have not had a college course of liberal study, or its equivalent. A minimum course of two years of such study should be insisted upon. A four-years' course should not be required for the two reasons (1) that it delays too long entrance upon active life-work and (2) that it does not use the time and effort of the intending professional student to the best advantage.

11. For a university to admit professional students direct from the secondary schools is to throw the weight of its influence against the spirit and ideals of college training, and to prepare for the so-called learned professions a large body of very imperfectly educated men. To say that any other procedure is undemocratic is not only a grave misuse of words, but is to imply that the universities should not struggle to give this democracy what it most needs, namely, well-educated and highly trained professional service.

The Teacher's Knowledge and that of the Scholar.

By DAVID EUGENE SMITH, PH.D., Professor of Mathematics, Teachers College, Columbia University, New York.

[Department of Secondary Education.]

1. *The Historical origin of the question.* There has long been a tradition that the guild of teachers is devoted quite exclusively to some fetich called method, and an equally absurd tradition that the guild of scholars is made up of individuals living in a cloister. This tradition had its renaissance in America with the establishing of normal schools, and at that time there was some reason for its existence. Those who still hold to the tradition, however, have not taken into account the change both in college and in professional schools in the last sixty years. The normal school of the best type to-day represents at least two years of work, about a third being academic, beyond a first-class high school, and thus is, in many respects, the college of the earlier time. The college, on the other hand, has recognized the value of some professional training for teachers, and is offering courses in education quite as extensive as those of the normal schools of a few years ago. Out of this traditional controversy has developed the question as to the best training for teachers, and in particular as to the knowledge of subject matter demanded by them.

2. *Necessity for definition.* It is necessary, in such a discussion, carefully to define the terms used, and the speaker proceeded to do this.

3. *The question considered.* The speaker then showed that if it were possible to break knowledge up into infinitesimals, the teacher's knowledge of any one infinitesimal part taught by him would be identical with that of the scholar as to that part. But just as modern psychology declines to allow us to isolate faculties, so common sense declines to permit this isolation of one bit of knowledge from all the other bits. The relationship of facts is itself a great part of knowledge, and here it is that the knowledge of the teacher differs greatly from that of the scholar. The scholar has the facts of a subject, and he may have them logically arranged; but the teacher must know these facts, and must know them in their relation to human life, and also in their relation to the child's mind—their psychological sequence. It is the influence of the mere scholar that tends to keep subjects in the curriculum after they have become obsolete as to human life; it is his influence that exalts "mental discipline," with no reference to the demands of life. Mere knowledge of facts does not make a great teacher; Mommsen knows many more facts of Roman history than Dr. Arnold did, but Dr. Arnold was a far greater teacher of the subject because he knew facts in relation to mind and to life, altho the knowledge of the two as to any single isolated fact taught may have been identical.

4. *The question answered.* The speaker then classified the points of similarity and difference in the knowledge of the subject as possessed by the two classes. He

showed the absurdity of the question as to the relative greatness of the two, owing to the absence of any common unit of measure. He also called attention to the fact that the circle of teachers always interests the circle of scholars, so that some individuals of each are clearly within the borders of the other, and that all individuals of each circle are within a fringe of the other. It is interesting to note, however, that the world produces more great scholars than great teachers. Switzerland has had a brilliant group of scholars, but she has produced but one Pestalozzi; Germany has been the home of scholarship for generations, but her Herbarts and her Froebels have been very rare; England, in the nineteenth century, led the other nations in certain lines of scholarship, but only one Dr. Arnold appeared.

5. *The training of the teacher vs. that of the scholar* was then discussed. The speaker showed the preparation of the teacher of certain typical subjects, particularly as it differs from that of the scholar in those subjects. The final plea was for the highest scholarship, plus the highest type of purely professional work.

Enlargement of the Secondary Field.

By ISAAC THOMAS, Principal of Edmunds High School, Burlington, Vermont.

[Abstract.—Department of Secondary Education.]

There is a tendency, in some places at least, to enlarge the field of secondary school work. How widespread this tendency may be or whether it is speculative or real need not now be discussed. Whatever it may be in extent or nature, it probably springs from the same causes: (1) an uneasy, uncertain feeling that the secondary field is neither definitely nor well occupied at present; (2) a desire, genuine or simply ambitious, to give the secondary school a larger place in our educational system. The corresponding enlargement of the secondary field would be in two directions: (1) in time alone, looking to work more definite and better in quality; (2) in work and consequently in time as well.

This paper discusses only the first; an enlargement of the secondary field in time, that better and more definite work may be done. However highly we may think of the work now done by the secondary school, we are compelled to admit not only that the demands made upon it, both by the public and the college, are not well met, but also that they cannot be so met under existing educational conditions. Shall the remedy be sought in an extension of time to be given to secondary work?

An extension of time can be made in only two directions, backward into the grammar school or forward into the college. (1) For the sake of those who end their school life with the grammar school we cannot afford to make that life shorter than it now is; (2) for the sake of the individual child just passing from childhood to youth, as he now enters the high school, we may not make that entrance earlier; (3) the boy entering college or life from the high school, as he now does at eighteen or nineteen, ought not to be kept longer under its restraint. If these objections are sound, the time limits of the secondary school are fixed both in extent and place.

Further, to meet well the demands, both of the college and the public, an extension of time to the high school is unnecessary. To meet adequately the demands upon it the high school may do two things: (1) insist that quantity requirement for the individual be lessened and the quality requirement be correspondingly raised; (2) insist that such an arrangement and division of work, from the kindergarten to the college, be made, as will give to each department in turn that which is fitted for it and for which it is fitted.

The second of these, tho much the more difficult, seems to me the only right solution of this question of enlargement, having both nature and good sense in its favor.

The Academic Side of Normal School Work.

By HENRY JOHNSON, Eastern Illinois State Normal School, Charleston, Ill.

[Abstract of paper read before the Department of Normal Schools.]

In one form or another normal schools are from time to time admonished that their business is to teach teachers how to teach and not how to acquire knowledge. No one understands this to mean, of course, that general scholarship should not be a factor in the equipment of teachers. What *is* implied is that the necessary foundations of scholarship should be laid before entrance to the normal school. The fact that normal schools themselves undertake to lay such foundations is viewed only as a confession of the existence of a necessary evil, which is to be eliminated whenever and wherever circumstances may permit. Two considerations seem to lie at the root of this attitude. In the first place, it is assumed that academic work in normal schools must, sooner or later, resolve itself into mere duplication of work offered in other institutions. It is then to be regarded as unnecessary. In the second place, it is urged that a general education forms no proper part of the program of a professional school. It has been excluded from schools of law and medicine. By the same token it ought to be excluded from normal schools.

The possibility of duplicating instruction may be readily granted. It is, however, a possibility not peculiar to normal schools. There is a duplication of grade work in the high school, of high school work in the college, and of high school and college work in the graduate departments of the university. The evil, if such it be, is seen most clearly in the case of normal schools, not because it is there exhibited in the highest degree, but because normal schools, owing to the circumstances of their evolution, have developed the greatest amount of sensitiveness to it.

The comparison of normal schools with schools of law and medicine is often quite misleading. In the latter, provision is made for a knowledge of the actual subject matter of law and medicine to be used in winning and saving, or in losing, cases. The corresponding subject matter for the teacher lies within the field of general education. The branches actually to be taught constitute for him what law and medicine constitute for the lawyer and physician. Those branches in the normal school for which the label "strictly professional" is claimed correspond, not to the complete curricula of schools of law and medicine, but rather to those minor courses that treat of the principles and methods of court procedure and of medical practice. The analogy of schools of law and medicine, if it proves anything for the normal school, proves more than is usually intended.

It is professional to know the child. It is also professional to know the subject-matter of instruction. Both are involved in the solution of educational problems. For the normal school to surrender the academic part of its domain is to invite at least a loss of balance. There is a zeal inspired by pedagogy which regards the subject matter of instruction as something to be determined wholly by principles derived from sources outside of the subject matter itself.

"It was two by the village clock,
When he came to the bridge in Concord town."

"This," says pedagogy to the child, "is history."

"But," protests some big dull book, "he was stopped on the road by British soldiers and—" "Objection overruled," retorts pedagogy. "The educational value of the story does not depend upon its literal accuracy." This is a method of procedure applied by pedagogy in various fields. It helps, not only to explain, but to justify that suspicion with which the world of scholarship regards the normal school. The "strictly professional"

needs the salt of academic savor to preserve it from its own vagaries and needs it in the normal school curriculum itself.

Wide Application of the Manual Training Principle.

By FRANK M. LEAVITT, Supervisor of Manual Training, Boston.

[Discussion.—Department of Manual Training.]

When I first noted the general topic assigned for our discussion I expected that we should have outlined for us some plan for employing manual training methods in what is commonly called the regular school work, and showing that the constructive principle is applicable in the teaching of language and literature, arithmetic, geometry, and physics. Instead we have had an excellent illustration of how the entire school curriculum, unified by the child's natural interests, may be made the basis of the manual training work, determining to a large extent the form and content of its course of study. By the adoption of either scheme there would result a correlation which is not only desirable but is fundamentally necessary for the realization of the highest ideals of manual training.

It is probably fair to assume that the work outlined by Miss Langley is not entirely, or immediately possible under the average conditions now obtaining in our large cities. There is, however, abundant food for reflection for both the regular and the special teacher.

There is also a wide field for both teachers in the work of inspiring the pupil to useful and constructive activity outside of school. It is, in fact, one of the best proofs of the real benefit of manual training that it possesses this dynamic power, that by its compelling interest the boy is driven to give up his leisure, often his play, and occasionally, it must be confessed, the study of some lesson that he may gain time to devote to some constructive problem in hand either inside the manual training-room or at home. Mr. Bryant's paper clearly shows that manual training does possess this dynamic power.

It is hardly possible that the ideal scheme outlined by Miss Langley could always be carried out under present conditions, and it sometimes happens that the kind of work proposed by Mr. Bryant is denied the manual training teacher by force of circumstances. What, then, can be done by one who finds himself more or less restricted by courses of study, large classes, a small room, and insufficient time?

I believe that even under such conditions there is an opportunity for a wider application of the manual training principle.

Manual training has had many advocates, and many widely diversified objects of manual training have been advanced. Whether our application of the manual training principle is to be broad or narrow will depend far more on our conception of what manual training stands for, than it will on the conditions under which we work. Let us assume, for example, that we believe the object of manual training to be the development of the creative instinct. Our work will be broader than it will if we deem its object to be the development of care and accuracy, of orderly thinking, of the logical doing which comes from working by plan, important as all this may be. With the creative instinct as an end, manual training will concern itself with the process of materializing ideas, with the hope that not only will the process itself be of value to the pupil, but that in some way consciousness may enter the heart and mind, even if only vaguely, that every material thing must first have existed as an idea and that any idea capable of expression in material may possibly be materialized by him. Other objects manual training undoubtedly has, but the paramount importance of this object must be evident to every teacher who has had the opportunity of observing very young children and also those of fourteen years and upwards. It seems a sad commentary, if true, that the almost universal confidence of the young child in his constructive ability, as evidenced by Miss Langley in her description of the work of her first grade, should have almost disappeared at the later period. For this there must be some explanation beyond the fact that age has brought better judgment. It should be remembered that with mature judgment should have come higher aspirations. Our ideals should ever be beyond our reach.

It has been claimed that the pouring in process, supposed by many to obtain peculiarly to the teaching of the older school subjects, has been responsible for this waning power. It is not my purpose to speculate as to whether or not this be true, but rather to inquire whether the methods employed in the manual training schools themselves are such as to conserve or to dissipate this native power of childhood.

In computing the value of the various agencies that assist in the development of any of the human faculties, it would be well-nigh impossible to estimate too highly the potency of the imagination. We well know the power of the imagination in the formation of character. "As a man thinketh so is he." The artist is not he who can accurately copy, even if his model be the most beautiful work of nature, but he who can build a picture or a cathedral after the pattern which he has seen in the mount of his imagination. The great inventors have been those men who have first dreamed that this or that hitherto unheard of thing might be, and have then set to work to materialize the idea. It is true that in this materialization the artist or the inventor, and equally the manual training teacher, must have due regard to process and principle. The head can not say to the hands "We have no need of thee."

But is it not possible that we have laid too great stress on the process, as Miss Langley has said, on the training of the hand, the development of a high degree of proficiency, and have even dwelt too fondly on that theory of the training thru the hand, that theory, accepted by all, which has its basis in physiological psychology? Is it not possible that we have neglected our opportunity of encouraging the individual initiative of our pupils?

I confidently believe that here is to be found the most promising opportunity for the immediate improvement of our work, without throwing absolutely to the winds that which we have again and again seen to produce excellent educational results. I mean the carefully planned course of study. Miss Langley has said that the teacher who wishes to depart from the orderly progression of the sloyd should have himself the systematic knowledge and training which that course affords. It is equally true that where the work must be entrusted, as is so often the case, to teachers of limited technical training and of little experience, the results will be excellent in direct proportion to the care and definiteness with which the course has been arranged. Only let it be clearly understood that the course is to be considered merely as a point of departure, and that it may easily be set aside when something more vital can be substituted.

We are to make practical suggestions. What is more practical than that we who are manual training teachers should go back to our work, no matter how restricted by rule and regulation, resolved that we shall modify our methods, even if following a prescribed course, so as to secure for our pupils a larger opportunity for self expression?

It seems to me that Miss Langley's paper is best summed up in her own statement, "responsibility educates." Let us see to it that we as teachers do not take all the responsibility and consequently receive all the education.

The one thing most necessary, I had almost said the only thing necessary to enable a teacher to carry out Mr. Bryant's suggestions is that he shall secure to the pupil a sense of personal achievement. The rest is mere detail. President Eliot said recently, "That is the best motive in all education—the joy in achievement." I

have seen class work which made me wonder how the teacher could achieve such results. But let us not forget that it is the pupil who must achieve—not the teacher.

With the thoughts contained in the two papers, and represented by the two words "responsibility" and "achievement" clearly in mind, we can not fail to widen our horizon and to secure for our pupils a larger development.

Physical Education in the Curriculum.

Should it be Fundamental or Incidental?

By INSPECTOR E. W. LYTTLE, of the University of the State of New York.

(Abstract. Department of Physical Education.)

Two facts serve to show how very incidental to educational thought and practice is the notion that education should concern itself with physical development.

First, the National Bureau of Education in reporting the number of students in secondary schools receiving instruction in various subjects makes no report whatever in regard to physical training.

Second, an exhaustive search fails to reveal that any school or system of schools in the world has kept systematic records of the morbidity and mortality of the children under instruction.

Generally in colleges and in the better class of private schools physical training receives more or less attention; but even in these physical training has been grafted on the course from outside demand and has not resulted from an inner growth. In primary and grammar schools of large towns and cities calisthenics are given; and while these are specially valuable for primary pupils, they are about as useful as charlotte russe to a growing, active boy.

If education is a development, not a cram, an unfolding, not a molding, expression not repression, then educational systems should have due regard for all the natural activities of youth.

Due regard for physical education does not degrade the educational ideal and need not exalt the physical at the expense of the material. It is the end of education, not the steps, that reveals the educational ideal.

If it is said that the public school should not attempt a complete education but regard only mental development, we reply that is just what the school has been doing and with this result, that the weakest primary and grammar schools have been furnishing the world the strongest men. And the very arguments used against providing an ample physical education in the public schools have been used again and again, first, against providing any free education; second, against providing free high schools.

There should be graded courses of physical training our schools, and the younger the children the gr..er should be the emphasis placed on the training of the body. In primary and intermediate schools teachers of physical and manual training should be at least as numerous as the teachers of the three R's. There should be generous provision for school playgrounds, for outdoor sports and excursions. School playgrounds should be as constantly filled as the recitation rooms. In the high school the gymnasium should find large use and military drill may very well be taught at this time.

Repression of physical development in the grammar and high school either drives boys from school or leads to undue distracting attention to athletics in college.

The claim of physical education for a proper place in the curriculum is supported by educational history. The high average of Athenian culture in the Periclean age was due in no small degree to the fact that Athenians regarded the development of the body as important as mental training. The education that produced great Romans was not a product of the schools but of the home, and was largely physical and moral. English public schools like Eton, Harrow, Rugby have long been noted for the training of great Englishmen, and nowhere in the world does physical education receive more encouragement, tho in an indirect way. Unfortunately the education which these schools give to the few is not provided for the many, and in consequence of this, coupled with the fact that seventy-six per cent. of England's population is urban, there has recently appeared marked deterioration in the physique of the average Englishman. In the British army illness and death are four times greater than in the German army where universal military service is required and is producing an improved physique. Not only military but school statistics show the need of physical education. During the first school year the average child gains only two and one-half pounds in weight instead of four pounds as heretofore, and increases five centimeters in height instead of seven. Higher boys' schools that oblige pupils to take regular gymnastic exercises thereby show decrease of illness ranging from fifty per cent. to seventy-five per cent.

Physical Training for the Mass of Students

By F. N. WHITTIER, Director of Gymnasium, Bowdoin College.

[Department of Physical Training.]

A combination of scientific gymnastics and supervised athletics has long been considered the ideal system of physical training. A few schools have attained something of this ideal, but more have fallen victims to the Scylla of monotonous gymnastic drill or the Charybdis of restrained, over-strenuous athletics.

Often these failures have been due to attempts to introduce in American schools the athletics of England or the gymnastics of Germany or Sweden. Such games and exercises were foreign, not national. Parents and children had little interest in them. They were not interwoven with our country's story and tradition.

It was necessary to Americanize physical training before it could take its rightful place in our school systems. For a full generation this process has been going on. America now has her own gymnastic systems and her own national games. Our normal schools for the training of teachers of physical training are unsurpassed by any in the world. The summer course at Harvard has a corps of thirty-six lecturers and instructors and an average attendance of 150 students.

The development of athletic sports has been no less marked. The present generation has seen the rise of two great games, baseball and American football. There is no doubt of the great growth of interest in things athletic. A Yale-Harvard football game occupies about as much newspaper space as a presidential election.

Educators must not lose sight of the true significance of these developments. The so-called craze for athletics and gymnastics has paved the way for making physical training a part of the school curriculum. It has given us what we lacked before, American gymnastics and a general interest in national sports.

Bowdoin college was one of the first institutions to put physical training on an equal footing with its other work. Courses in physical training bring the same credit in rank as courses in Latin or Greek. The Sargent system of examination and prescription is supplemented by the following courses of class work required during the winter term.

Freshmen.—Class exercises: Military drill, setting-up drill and Indian-club swinging.

Squad exercises: Indoor athletics, chest weights and heavy gymnastics.

Sophomores.—Class exercises: Dumb-bell movements and boxing.

Squad exercises: Indoor athletics and wrestling.

Juniors.—Class exercises: Fencing with single sticks and broadswords.

Squad exercise: Indoor athletics.

Seniors.—Class exercise: Fencing with foils.

Squad exercise: Indoor athletics.

As a part of the required work, each student is given an opportunity to learn something of the out-of-door sports. During the fall and spring terms, nearly every student at Bowdoin engages voluntarily in one of these sports.

There is no claim that the above plan is ideal. It is, however, measurably successful. It brings interest in physical training to the mass of students. It brings the whole college to the gymnasium, athletic fields, golf links or tennis courts.

Child Study Theses.

By PRIN. Z. X. SNYDER, Normal School, Greeley, Col.

[Abstract of discussion, "Child Study in Relation to Secondary Education," Department of Child Study.]

I. There is a physical difference between boys and girls as to endurance and organization. Energy that is used up to develop and prepare girls for the natural functions of life is consumed in school grind.

In the very nature of the case the powers of life of a girl are used more largely to develop her future functions than those of a boy during the adolescent period. Less energy goes to the development of nervous tissue in the girl than in the boy. Naturally less function must be required of the nervous centers of a girl than of a boy.

II. More time and energy of girls growing out of home duties and social relations are required of them than of boys.

There are duties belonging to the household of a domestic nature and also of a social nature, that consume the time and energy of girls more than of boys, which absolutely prevent girls from doing as much work in school as boys do. It is unfair to their organization and to their standing in school to require of them as much work, as thoroly completed, in the same time.

III. Mixed schools stimulate the premature development of social life. This premature social life leads to dissipation of energy and often to premature marriage which often ends unfortunately. During the early part of the adolescent period, the powers of life of a girl go, or should go, to prepare her for her natural function. The grind of the schools arrests this natural development, especially if she attempts to keep pace in her studies with boys. Now the high school which is a school of the people should ever aim to give the physical nature a chance. Posterity demands this; the girl's nature demands this; civilization demands and requires it.

If the above three theses are true, this fourth one follows:

IV. That more time should be taken to do a given school work and separate schools should be established for boys and girls.

The truth of the above theses seem true from certain investigations that have gone on, both from theoretical and practical standpoints. Superintendents of schools who have been observers of the practical workings of high schools feel the truth of them. They feel sure that there should be some source of relief and that it must be found in taking more time for girls and probably separate schools for the sexes.

From the theoretical standpoint, or from the standpoint of quantitative investigation by educators, psychologists and physiologists, the truth of the theses seems to appear.

Admitting the truth of the first two theses, it would seem that it might be arranged without separate schools. But, admitting the third, it seems almost impossible to meet the conditions without separate schools. It would seem that the third is the most important of the three.

In the association of the sexes in high schools, familiarities and intimacies develop very frequently by which the energies of the boys and girls are dissipated and experiences had which are the regret of their lives. There is undoubtedly an excess of social dissipation connected with the high schools. Card playing, dances, receptions, hay rides, and individual indulgences seem to be the aim of a modern high school, so far as the students are concerned.

The Child's Favorite Study.

By EARL BARNES, Philadelphia.

[Abstract. Department of Elementary Education.]

Studies have a two-fold value—to store the mind with information and to train it so that it will work effectively. If we think of a study as furnishing information then it is obvious that the adult alone can know what is best to give to the child; if we think of the study as furnishing training then the child's attitude toward the subject becomes of great importance. Several attempts have been made to determine children's attitude toward the subjects they study by having them describe the one they like best and the one they like least. Supt. H. E. Kratz, of Sioux City, made such a study in 1897; Miss Kate Stevens made one on the children in a North London board school in 1899, and, in the same year, M. Chabot tested 400 children in Lyons, France. The present study is based on returns from three cities in Pennsylvania gathered in connection with institute work during the past months. The tables presented are based on 1,150 papers written by boys and 1,200 by girls in a progressive manufacturing city of about 50,000 inhabitants. The city has excellent schools, a select staff of teachers, a highly trained and progressive superintendent, and one of the best courses of study in the country.

The boys favorite subjects are number, 35%, and reading, 24%, with spelling third, 12%. Geography, 7%, and history, 8%, are the only other subjects that have any considerable following. Language and grammar are chosen by only 3% of the boys. Subjects most disliked by the boys are grammar and language, 19%, spelling, 15%, and physiology, 9%. Penmanship—with the newer subjects that have been added to enrich the curriculum—physiology, music, and drawing are none of them chosen by more than one boy in a hundred. Fewer of the girls care for number and more of them care for language, but, on the whole, their choices are strikingly close to those made by the boys. The conclusion from this part of the investigation is that the newer subjects have taken little hold on children's admiration, but, instead, they cling to reading and arithmetic.

If we examined the choices thru the successive grades we find that, in the beginning, children like reading, and a fair number dislike it; at fifteen, they neither like nor dislike it; we do not seem to have succeeded in furnishing attractive content for reading after the mechanics are mastered.

In the lower grades many children dislike number and few like it; at fifteen, many like it and hardly any dislike it. This would seem to say that in teaching young children number we are working entirely against the current, while, after ten, the current is all with us.

Language and grammar are disliked by children of all ages; evidently the new subject, "language," has not won the liking of the children. They say it is empty and tiresome.

Physiology is strongly disliked at all ages; whether this is because the subject has been forced into the course of study by an adult reform movement, or whether there is a natural reticence in children which unfits the subject of physiology as now taught for the elementary course of study we cannot say.

That the results here given are not due to locality is shown by the fact that the returns from three different cities are very nearly the same and they all agree, in the main, with the results reached in Sioux City. That liking

is not determined by the fact that the subject has been long taught is proved by the small vote given to writing. That continuing a subject thru the grades will not necessarily make the children like it is proved by the returns on language and physiology. If it be said that the results are due to the teachers liking certain subjects then we have to show why the teachers, also reared in American schools, like them.

In any case, this study is simply diagnosis, and practical school men must make the application.

Nature Study True to Life.

By EMMA G. OLMSTEAD, Training School, Scranton, Pa.

(Part of discussion of paper by Professor Hodge before Department of Elementary Education.)

Nature study is in its infancy. Its christening is a happy one. No better name could have been selected. So much has been said in the past of nature study that most of us have a very clear idea of the aim in teaching it.

There is some good teaching of nature from the standpoint of science and some from the poetic and sentimental point of view, and here and there is to be found a teacher whose personality gives freshness and vigor to this subject.

We are far from teaching nature as we teach number or language, whereas it should be more real, more vitalizing, and more universal than any other teaching.

The reaction of living contrary to nature's laws is recognized and nature study more than any other subject can awaken that latent love for all God created and bring the children into contact with the things themselves. This means more out-of-door life, and if nature study does no more than this, we should hail it with delight and give it a prominent place in the course of study.

One error, almost universal, is to interpret nature study as nature teaching. Nature study must be by the child, not by the teacher. The unfolding and the growth must come from the child's own efforts; the teacher may quicken and warm it into life, but she cannot do the child's work; that is the child's privilege.

Nature study must be natural. The tendency is to give the child too much, to give it to him too early and too fast. There should be nothing perfunctory and nothing stilted. Unless the study of nature can be rational it would better be learned about from books.

Who of us has not seen children painting "from nature" in an unnatural way. Placed upon the wall is a bunch of cherries. Children are allowed, if not actively encouraged, to begin by painting the brilliant cherries and then put in the leaves, and finally the branch. Such treatment of nature is demoralizing. There is a study about nature from the printed books that is heaven high above such travesty. Education to be true does not draw away from nature, but takes us to her to know her as she is.

The problems multiply when we try to decide what to study. If we are willing to be led by little children—which is one of nature's ways of guiding—their interests will be shown first in living things about them. Later, as they develop, they will lead us to the inanimate in life.

There are some excellent books, but how are you to choose? Go to nature for the truths as to the what and the how.

The method in nature study must be natural in three essentials. It must be the natural method of the child. He is, first of all, interested in the ungrown and the undeveloped. It is the baby dolls, kittens, puppies, bunnies, chickens, and lambs, and not the large doll, cat, dog, rabbit, hen, and sheep that attract him most. He studies for a long time animals of size and action that are attractive and substantial—that he can get hold of by using the larger muscles. He does not naturally take kindly to worms and caterpillars, to flies and bugs. Many of the animals selected for school study are those that a child would never study if left to himself. He may chase a butterfly, but he cares nothing for it after he has it. Moralizing may not be harmful, but teach it as ethics and do not call it nature study by a child.

In the second place the method in nature study must be natural in that a child deals with but one thing at a time and that he enjoys it for its own sake. When a boy plays with jacks he has no use for marbles; when he rolls the hoop he cares not for mud pies. He has but one love, one fad at a time, and you do violence to his whole nature when you make him go with a hop, skip, and a jump from bugs to buds, from pebbles to cherry stones, and from cotton to snow.

In the third place the method must be natural in that nature is studied out-of-doors. The arbutus is not natural unless it is trailing—nor clematis unless it is climbing—the violets must be in the field and the lilies in the pond. Nothing outrages a child more than to make him think he is studying nature when he is handling grasshoppers or crickets by the pint or quart that have been preserved in alcohol, or pulling over wilted violets, hepaticas, and forget-me-nots.

There is no more noble mission for a teacher than to follow the child in his nature study of the works of God, out in God's sunshine, in fresh fields and forests. There is no more ignoble work done by a well-intentioned teacher than to dismantle God's works and try to make a child think that the wreckage which she shows him represents creative wisdom, power, and beauty.

If the child studies nature only when and where you lead him you have done no more for him than when you solve his problems or translate his French. Field days and school gardening are valuable no doubt, but if there are no field days but school days, and no pulling up of weeds except as a school exercise then you have scarcely put a veneer upon his aimless life and soulless nature.

Reverence for Him in whom all things live, move, and have their being must be natural or it is not reverential. The rocks in their solidity, the fruits and grains in their life giving, the flowers, birds, and animals in their beauty, the heavens in their majesty, all speak God's goodness.

"High words and noble in all lands
Help me, my soul is fed on such,
But oh! the touch of lips and hands,
The human touch,
Warm, vital, close life's symbols dear,
These need we most, and now, and here."
—RICHARD BURTON.

The Scope and Results of Mothers' Classes.

By ELIZABETH HARRISON, Co-Principal of the Chicago Kindergarten College.

[Department of Kindergarten Education—Summary.]

Much tact and ingenuity have to be exercised to continue the mothers' meetings long enough to enable the women to realize that there are certain unchanging laws in nature and certain inborn instincts in all children which, if rightly understood, will aid them much with their children.

First of all, an interest can best be awakened by visiting in the homes of the children, next by inviting the mothers to visit the kindergarten at the time of the various festivals held there, when they can see their children's joy. Every mother responds to the touch of the woman who makes her child happy. Next, in this socializing process is the afternoon coffee or some other light refreshment. The click of the tea cup breaks the ice of reserve. These introductory courses by means of which the kindergartner is "gaining her influence before she uses it," may take on the form of a sewing bee, or patterns for children's garments may be loaned and cut

out, or the mothers may be shown how to construct home-made toys for their children or finger songs may be learned for the baby's amusement.

Some form of activity is better than passive receptivity. Music is always a help, especially if mothers can be induced to join in the singing. Pictures of the "old country" may be shown to foreign born mothers. Then pictures of our own country. Then little talks about what is going on in the morning kindergarten, what it means to the child, and how the mothers can help out, etc., etc.

But it should always be kept in mind that "a mothers' class" must never degenerate into a neighborhood gossip club where the time is spent relating trivial faults and virtues of individual children. To be a real, vital power a mothers' class must eventually lead to the higher side of the work and must tend towards educating a mother, first to realize the tremendous importance of her work *as mother;* second to realize that many of her problems with her child are the problems that meet *all* mothers (this helps her to take a *rational view* of the subject instead of a merely *emotional* view which is too often the case); third, she must realize that she is to study the inner motive as well as the outer deed if she would build up the character of her child. And I have never yet met a mother, be she rich or poor, base or noble, educated or uneducated who did not respond to this last appeal. No matter what she herself may be, her prayer—tho oftentimes too vague to be uttered—is always like unto the prayer of Hector, "Jupiter! vouchsafe this child to be a greater man than I."

Sight Singing and Song Interpretation in Normal Schools.

By CAROLINE V. SMITH, Normal School, Winona, Minn.

[Discussion.—Department of Music Education.]

The problem which greets a normal school is, in a measure, threefold; how to do the things left undone in the past; how to meet the needs of the present; and how to prepare the student for his future calling as teacher in the common schools of the state. The subject of music, it seems, is not alone in this respect.

The average student upon entering a normal school is a product of the small town, which does not offer much in the way of musical advantages; he is either a high school graduate, or has had his training in a village or rural school—none of these institutions offering a well-defined course in music. He enters a normal school ofttimes with but little musical experience, save a love for music, and a splendid capacity for work.

Perhaps no class of students are more teachable in music than in normal schools, since they face the problem of teaching the subject in the common schools and are more than willing to overcome past deficiencies.

In most cases the student must make a beginning either in theory, sight reading, or both; in song interpretation he has had but little experience save as he has studied with a specialist; the field of school music literature is unknown, since it is increasing so rapidly within the past few years; history and biography of music are an unknown world—as are current musical events; and the correct use of the voice is a revelation to him—especially from the child's standpoint.

What does the normal school offer to overcome present or existing needs of the music student? I regret to say in most cases a very limited time period—intermittent lessons—and taking for granted that everything can be accomplished under these conditions because it is music! Is music so easily mastered? Would such a view be entertained for one moment towards any other subject? Has anyone ever become proficient in the most simple trade, art, or profession in a term of sixty lessons?

It might well be asked what constitutes a fair knowledge of music from the teacher's standpoint. Is merely the knowledge of signs employed—the sharps, flats, rests, etc.,—a study of theory sufficient? Do we study signs only in literature? Are we satisfied with mastering only the primer in reading? Is the alphabet of any subject sufficient for successful teaching? And yet we take for granted that the normal graduate who has acquired the most simple rudiments of music is prepared to teach the subject—is capable of inspiring a love for music. This is of course a very superficial view on the part of school authorities, and is the cause of much of the deplorable condition existing in school music to-day.

If the future of the normal school graduate is to be more fortunate than that of his predecessors, the attitude of the entire teaching profession must change towards the preparation necessary for the successful presentation of the subject. Permit me to suggest that especially must those highest in office take a more serious view—the university, normal, and high school need to unite in an effort to give a more liberal course in music to those who are to assume the responsibility of teaching the subject in the schools of our commonwealth.

I cannot help wondering why normal school graduates alone ought to be held responsible for inefficient teaching in music. In Minnesota, as in other states, one-third of the teaching force consists of normal school graduates, all others are either high school or university graduates—who enter upon the profession of teaching without much preparation in music and naturally the subject is neglected. The responsibility of presenting the subject efficiently ought to be shared by all alike, then only will there be a sure foundation in all schools.

Normal schools, on the other hand, must extend the curriculum or else fall short of the demands of to-day.

Music has progressed wonderfully within the last twenty-five years, and the schools must aim to keep up with present standards—else disappoint the expectations of those most interested in satisfactory results. A curriculum of twenty-five years ago was quite sufficient for those days—a term of music then may have been all-sufficient—a year of thoro training will scarcely meet the requirements of the present time.

More attention ought to be paid to the musical content or thought expressed in the books selected for study, in order that the student may obtain a broader view of the best things in musical literature. (Mr. Fullerton's book for normal schools is a long step in advance of material used in the past—and contains much that is rich in thought—is thoroly suggestive from every standpoint.)

Sight reading, *the technical side* of music will satisfy the mechanical student—and can be mastered in a comparatively short period of time. Song interpretation, *the spiritual, the artistic element* in music is demanded by the musical student—the one who has thought, studied, and felt much—and who is seeking what all must find—the soul of music.

The technical side no doubt has received sufficient attention in normal schools and a beginning has been made, but are we to pause at the threshold—are the doors of the musical world never to be opened to those who stand waiting—who must unfold so much that is beautiful to the children in their study of music?

Are voice culture and song interpretation still to wait—as they must with the insufficient time limit allowed in normal schools? Only a moment's thought will reveal the fact that the time element is very essential in acquiring sufficient skill for the interpretation of even the most simple song. The higher life can be attained only thru much thought—and the student must think musically before he can interpret the songs so dear to child life. Music can have a meaning only with the right kind of experience in the subject—then only will music become a language—and help uplift the home, school, and religious life of our nation.

Singing and Song Interpretation.—Discussion.

By A. STANLEY OSBORNE, New Paltz Normal School, N.Y.

As the result of inquiries made from 154 students of a normal school in New York state I find that 97 entered the school on high school credentials and 57 on examination. The number of years spent in the graded and high schools averaged ten. An average of one period a week was devoted to the study of music. Thirty-four claimed ability to read music at sight, but subsequent experience showed that many were wrong in their claim. The general impression was that their musical training had been of little value.

These seem bold statements, but, if you are skeptical, ask a young man or woman, in almost any city or town, some of the following questions:

"Can you sing?" "A little."

"Can you sing music at sight?" "My, no! we only sang songs in our school."

If you question him about the keys, signatures, scale, intervals, triads, chords, major or minor, and transposition, the poor student is bewildered, for these things are entirely unknown to him.

To a class of normal students studying methods of teaching music I gave the subject of this paper upon which to write a theme. All drew upon personal experience for material. All were of the opinion that the difficulty of teaching music in the normal school lay in the insufficient training received in the grammar schools.

One student wrote as follows:

"During my school life I studied music from fifteen to twenty minutes daily for a period of at least twelve years. Yet I entered normal school with very vague ideas of sight singing."

Another wrote:

"Altho music was taught in the high school its character was such as to develop no confidence or power."

Another wrote:

"From the existing conditions prevalent in the district schools it is almost impossible to get any musical training."

Such students as the above are likely to enter a normal school and study music with the object of teaching the subject.

Second, let us consider the amount of time given to the subject in the normal school. In many states the subject is supposed to be covered in from 160 to 200 recitations, or about 40 full weeks of teaching. This time includes the teaching of the elements of music, sight singing, and the methods of teaching. The average student cannot master sight singing in that time (40 weeks) or in twice that time, that is, the ability to sing all common harmonies at sight, such as hymns and patriotic songs.

Another difficulty the teachers of music fail to realize is the period of adolescence thru which the majority of students are passing. Or, if conscious of this condition, they utterly ignore its psychological and physiological bearing upon their subject and its presentation. Still, between the ages of thirteen and nineteen a greater change occurs in the physique of a child than at any other period of his life. The form of the face, neck, and throat undergo a great change and a young man must relearn the use of the muscles and cavities of his head and throat in singing. But we must not fail to attempt to solve these problems nor fall back upon song interpretation, for that condition, as Miss Crane has said, has been endured too long and the church, Sunday school, and patriotic meeting furnish good examples of its results.

Let us give the student power to teach something of value. In the given time (forty weeks) he cannot master sight singing, but he *can* master enough of time and tune and the elements of the art to thoroly understand, if not be able to execute, its difficulties. He can at least learn the scale and its intervals. But, you will say, every student of music can sing the scale and its intervals. Yet a short time ago I visited a prominent normal school in New England. After hearing several classes I asked permission to test a class in sight singing. I took as my test the scale and its diatonic intervals. Out of a class of fifty I found only two who had any mastery of them.

I believe that one cannot learn to sing at sight if he does not know, thoroly, the intervals. Yet many teachers attempt to develop sight singers before their students can sing the scale.

In other words, the mechanics of music and not the esthetics is of more value to the normal student; for one who is thoroly grounded in the elements of his subject will always have an abundance of material from which to teach. With a thoro knowledge of the scale, time and its divisions, keys and their relation, conducting and phrasing, he will handle the subject in an intelligent manner, while his teaching will be his training.

The proper use of music is to convey a stronger impression of the sentiment of the words to the listener, and if this is overlooked the beauties of both words and music are lost.

But someone will say that if so much stress is laid upon the mechanics of music the student loses the influence that the interpretation of beautiful music has upon the mind and soul. Would not our music be better if we were ready readers? Would we not appreciate a great musical composition more fully if we could read it? Would we be satisfied with poor music if we could read the more difficult? Can we expect an artistic interpretation of music if we are not well versed in the foundation of the subject? Therefore, I advocate for the normal student a constant repetition of the elements of music and as much sight singing as will grow out of their application.

As for song interpretation, what material have we to give a normal student? Someone has yet to develop a historic order of musical works that will be suited to the student in each stage of his training from the primary grade to the close of his school life. I would make a plea for a course of musical literature as carefully worked out as that of English literature and correlated as nearly as possible with the other subjects of the curriculum. Practically every subject except music is now correlated and by this correlation it has gained materially in its effectiveness.

I think it is a worthy function of this association, and I would suggest that it appoint a committee whose duty it shall be to study and recommend a course of musical literature correlated, as far as possible, with the other subjects and suitable for the pupil in each period of his school life.

Further Discussion.

By C. A. FULLERTON, Director of Vocal Music in the State Normal School at Cedar Falls, Iowa.

[Abstract.]

Investigation discloses the fact that over 60% of the students in all the state normal schools of the United States have upon entering the school no previous preparation in vocal music. 90% of these schools require music in the course and the average time given to it is three hours a week for twenty-four weeks. Even with this limited time for work it is possible to have the school rise to a high musical plane if the energy be stimulated and directed in right lines. In dealing with adults who are beginning the study of music, special emphasis should be placed upon developing technical skill. Two-thirds of the entire time spent in the regular class work should be given to thoro and persistent work in note reading and in beating time. If this be done with sufficient success so that 90% of the students master it there will be a basis formed for a musical development in the school of almost boundless possibilities. The rank and file of the students will learn the language of music so that they can sing the works of the masters. This sublime music will react and inspire them to further musical development.

A more advanced course in music will be demanded and supplied. The increased interest in music will result in a more vigorous effort to apply the principles of education to the teaching of music. When real, inspiring, artistic music is habitually sung, the cheap, claptrap jingles so often sung in religious meetings, and the vulgar stuff, falsely called "popular music," which is too often found littering the pianos in otherwise wholesome homes, will vanish as darkness does before the light. If there is any institution on earth that should have a musical atmosphere about it, it is a normal school. The leavening process obtains in music as well as in religion. Let every normal school rise to its opportunities.

How to Improve Public School Gymnastics.

By DR. E. H. ARNOLD, New Haven, Conn.

[Department of Physical Train'ng.]

In order to improve gymnastics in public schools improvement should be had along three different lines. There should be improvement in the facilities for gymnastics in the schools, improvement in the exercise material, and in the methods of teaching gymnastics, and finally improvement in the personnel of the teachers of physical training. Improvement of the facilities includes increase of the time given to gymnastics in the schools, both within the school hours proper, in the intermissions, and after school hours; the best use of the time allotted to public school gymnastics. Improved facilities for gymnastics means better space for the performance of gymnastics, the gradual transferring of the gymnastics from the school-rooms into halls and finally into well equipped gymnasia, both in and out-door gymnasia.

In order to improve gymnastics in the public schools we must have better equipment, both in regard to hand apparatus and apparatus proper, as well as implements for plays and games, and their proper care and disposition. The best of facilities for teaching gymnastics however, will avail nothing if deficient methods for teaching gymnastics are employed. The methods to be used in public school gymnastics are not only those that take cognizance of the effect of exercise and adapt the exercise to the peculiar conditions of school children, but the methods must also be adapted to the peculiar organism that the public school system is, in order to accomplish the end sought. The most urgent need, however, of public school gymnastics is an improved personnel of the teaching corps. Given properly equipped, experienced teachers of physical training in the public schools, and improvement of facilities and their increase under existing circumstances, the best use of time, space, and implements already granted to the gymnastic branch, the seizing of every opportunity to increase these factors without hurting the interests of the school organism as a whole, the better selection of exercise material and the improvement of methods of teaching within the public schools will surely follow.

The most successful teachers of physical training for public school work are those who have had several years experience in teaching the common public school branches in the public schools. They know from personal experience the need of gymnastics from the standpoint of the pupil as well as from that of the teacher, and they know best in what way improved facilities may be gotten, and if they are had, how to utilize them. They will be most apt to adapt gymnastics to the necessities and opportunities of public school work and they will be most apt to work in conjunction with the other teachers and school authorities, which is an absolute necessity for the final success of any specialty within the school. To this intimate acquaintance with the school organization gained by an experienced public school teacher, there must be added as complete a training in gymnastics as any of our normal schools of gymnastics at present will give—that is, nothing short of a two-years' course in the practice and theory of gymnastics, the theory including as much of school hygiene and school sanitation as possible.

The great advantage of the selection of teachers of physical training for the public schools from such sources will be this, that we are very much more apt to get permanent teachers from among people who have chosen teaching as their life's work, and while teaching the common school branches have resolved to devote themselves to the specialty of physical training. If experience is the most necessary factor to successful teaching in common school branches it is much more necessary for the teaching of a specialty in public schools. It is very unfortunate that not only a great percentage of public school teachers of the common branches stay in the work a comparatively short time, entering the work only as a convenience and leaving it at the earliest possibility for something better; just about the time that thru experience in teaching they have become valuable members of the teaching staff, but that this unfortunate feature also exists among physical training teachers. It would seem, therefore desirable to have male teachers of physical training for the public school system, they promising greater permanency in their calling. It is, however, a mistake to employ as such teachers, male or female, recent graduates from colleges whose sole experience in physical training and their only knowledge of it is their more or less casual contact with it in the gymnasium. While it must be admitted that a college training is the best possible preparation for teaching, it must likewise be granted that a college graduate before becoming a teacher should undergo training as a teacher, and a college graduate wishing to enter the field of physical training as a teacher cannot dispense with it.

A Course in Physics for Technical High Schools.

By PRIN. CHAS. F. WARNER, Mechanic Arts High School, Springfield, Mass.

[Department of Science Instruction.]

The subject assigned to me implies that there are some distinctive features in the independent manual training high school,—or technical high school, if the latter name be preferred, which should naturally have a controlling or at least a modifying influence upon the instruction in physics in such schools. Our first business, therefore, is to settle what these distinctive features are.

The most obvious characteristic of technical high schools is found in that which gives them their name and their right to a distinct place in our educational system. Whatever else they may teach, they must always make the manipulation of materials, following correct designs and right methods, their specialty. In such schools constant attention is given to the expression of constructive processes at the drawing table and to the practical working out of these processes at the bench, the forge, and the lathe. This brings, or should bring the boy, during his high school days, into constant contact with many fundamental industrial methods, compeling him or, perhaps it would be better to say, inviting him to learn the use of hand and machine tools and to become familiar with the appliances for generating and distributing power. It is for him a schooling in applied science or, better still, applied physics, for he is constantly employed in operations which involve fundamental physical properties and laws. For the girl, when similar educational opportunities are open to her, practical methods imply constant practice of the same general character tho along different because, for her, more appropriate lines. It cannot be questioned that, in high schools where mechanical work is required of all pupils, there is for both boys and girls, but especially for boys, immediate and constant application of the fundamental principles of physics.

Two important consequences follow from thus recognising the importance of physics as related to the distinctive work of technical high schools. In the first place, there arises in the mechanical departments a demand that the teaching of physics should be thoro and practical. In the second place, the science department, not unwilling to respond, but realizing that the enlarged opportunity to enforce its teachings thru practical applications means increased responsibility and more work, demands, in its turn, a chance to meet this responsibility and to effect a closer correlation of its work with that of other departments, especially with drawing, shop work, and mathematics.

To meet these two natural and most reasonable demands, the first requirement is more time—much more time than is commonly given to physics; the second is that the study of physics should be begun early—the first year, if possible—and not delayed till the third year, when more than half of the rich opportunities for illustration and application afforded by the mechanical departments of the school have been left behind; the third requirement is that the course of study in physics, the method of instruction, and the equipment in books, apparatus, and teaching force should be planned so far as practicable upon a technical basis and without much reference to the practice which obtains in other high schools, where a single text-book and simple illustrative apparatus made for that purpose alone will suffice. In the technical high school several text-books and a good reference library of modern, scientific, and technical books are indispensable, and the student should be taught the use of measuring instruments of the commercial type and be made familiar with other scientific apparatus of the kind actually found in use in the arts and industries.

A second peculiarity of the technical high school may be found in the character of its membership. They are often schools for boys only; and even when open to both sexes, the proportion of boys is larger than in other high schools. Last year in Cambridge the manual training high school registered over fifty-three per cent. of the boys entering the three high schools; and when we examine into the tastes and capacity of these boys, we find that a statistical percentage understates the effective proportion of the boy element that inclined toward mechanical training, for, excepting the small number of boys who, for good reasons, elect classical studies which are the specialties of other schools, it is, generally speaking, the lazy, indifferent, good-for-nothing boy who avoids the manual training high school. There is too much work for him there. Naturally it attracts the active, inquiring, normal boy. It probably gets three-fourths of the boys of this kind who enter high schools. Such a preponderance of boys in the technical school means much in determining the extent and character of the course in physics, which is pre-eminently a study for boys.

A third characteristic remains to be noted, and perhaps it should be considered as the most important. It may be described as the stirring, life-giving atmosphere which pervades all departments of a school designed to emphasize the practical element in all its teaching. Such schools, more faithfully than all others, reflect the spirit of the age—an age of wonderful achievement in the application of natural forces to the service of man—an age of applied science. These schools came into existence in answer to the demand for a method of secondary education which should give the touch of modern life to the work of the school-room, so that there should be a vital connection between the information and training gained and the associations and activities in the world outside the school. All the studies of a technical high school should feel the inspiration of this new idea, and it is the glory of a school of this kind that *all* its lines of work *can* take on more or less of a practical character. Instruction in mathematics is enriched by practical applications found in the shop tools and machines. The English department finds in the mechanical work a wealth of subjects for theme writing. The study of economic history and commerce is greatly helped by a knowledge of industrial processes. But no study can match physics in the ability to establish vital relations not only with the various mechanical departments of a technical high school, but with all other lines of work. Physics gives a living purpose to much of the teaching of algebra and geometry and receives in turn incalculable assistance in the solution of its problems and formulas. In its higher phases it is a mathematical quite as much as it is an experimental subject. It touches the subject of language in demanding that accurate and adequate expression be employed in the statement of its principles and laws, both in oral and in written English, and in the preparation of notes and papers.

Physics has played an important part in many of the great epochs of history; it has won its decisive battles and can claim its share of saints and martyrs and heroes who, thru their devotion to this branch of science, have contributed to the advance of civilization. It occupies a place of honor in history and biography. In the world at large physics is acknowledged to be the center on which hangs our knowledge of natural forces, the foundation on which have been laid the most characteristic achievements of the age, whether it be called the age of steam, of machinery, of transportation, of steel, or the age of electricity. Among all the sciences that deal with material things physics stands first. In a school which recognizes in its work, so far as a school can, the activities of modern life, physics should take the position which the world has assigned to it as its rightful place among the natural sciences. If these schools do their full duty by physics, they may compensate for the loss of popular interest in the science as shown by the constantly diminishing numbers electing this study in the ordinary high schools. It has been crowded out by wrong methods of presentation, by the temptation of easy studies, by lack of time, by failure to appreciate its usefulness. The technical high school can remove all these difficulties.

Course of Study Outline.

I have prepared a chart outlining the course of study in physics as planned for the mechanic arts high school of Springfield. It will be noticed that an attempt has been made here to meet the peculiar conditions which obtain in schools of this character and to fulfil the requirements of a complete course in physics—perhaps the most complete yet attempted in secondary schools. It is a four years' course. During the first two years the entire subject is covered as thoroly as possible; and so far it is a required study for all students. During the third year physics is made almost entirely a laboratory subject, and the work is largely quantitative. In the fourth year the same method is continued in electricity for those who elect it, and optional courses are offered in some of the most common practical applications of physics. The last two years of this course are not required for all students.

The topics given in the outline are not intended to be complete, but simply to indicate the range and quality of the work. Much depends upon the method of presentation. The methods of exact measurement and mathematical reasoning are avoided as much as is wisely possible during the first two years. This is when boys are interested in dynamics—in how and why things go—how boilers, engines, motors, dynamos, telephones, and scores of other things are made and how they work. It is not the time for methods of scientific research; and these must be used sparingly even in the advanced years. The boy's natural zeal for this study from his own point of view must not be killed; neither should he be allowed to fritter away his time in playing with scientific toys and gimcracks. He should be put to work—he may think he is playing—upon apparatus and machines of life size and of real dynamic value. The great usefulness of physics, its countless applications, the stories of its discoveries and inventions, its fascinating theories, and its

promises of future development, if rightly presented, will sustain the natural interest of any live boy thru a course in physics as complete as the length of his school days will permit.

FIRST YEAR.

Four periods (45 minutes each) weekly for thirty-eight weeks.

Topics.—(a) Elementary conceptions of matter, motion, force, work, power, and energy.—The general law of machines and applications in simple machines. Pressure in liquids, with problems in computing liquid pressure due to gravity; buoyancy and application in specific gravity; atmospheric pressure and the barometer; Boyle's law in simple form; pumps, siphons, and other hydraulic and pneumatic appliances.—Transmission of pressure, with problems in computing interior pressure.

(b) Magnets and their influence upon magnetic bodies; terrestrial magnetism; magnetic charts and instruments.—Electrostatics.—The simple voltaic cell and typical varieties.—Important effects of the electric current, with common applications.—Measurement of resistance by the method of substitution.—Arrangement of voltaic cells, electric bells and incandescent lamps in series and in parallel (including special grouping), with illustrative problems.—Divided circuits with practical problems.—The principles of current induction; induction coils and transformers; the telephone; the dynamo and the motor.—The thermopile.

Method.—A combination of text-book lessons, with laboratory instruction and a limited number of lecture table demonstrations. The laboratory exercises are qualitative, quantitative, or constructive as best suits the topic under consideration, and they require about one-third the total time given to the year's course.

Correlative Work.—Problems in algebra, drawing, wood-work, and iron-work.

SECOND YEAR.

(a) Three periods weekly for thirty-eight weeks on *heat, light, and sound,* and (b) five periods weekly for sixteen weeks on mechanics, (c) college preparatory physics (elective).

Topic.—(a).—Discussion of the nature and sources of heat; temperature; the effects of changes of temperature; common applications and laws.—Determination of co-efficients of expansion.—Conduction; convection; radiation; absorption; and reflection.—Cooling by radiation, dew-point, and humidity.—Quantity of heat and its measurement.—Specific heat and its determination.—Latent heat and its determination for water and steam.—Applications.

Discussion of the nature of light and its propagation; the principles of photometry; shadows; the pin-hole camera.—The laws of reflection; images in plane, concave, and convex mirrors; parallel mirrors and mirrors at an angle of 90° or less.—Refraction and the index of refraction; common applications.—Prisms and lenses; measurement of focal length of lens.—Optical instruments.—The eye.—The spectroscope and spectrum analysis.—Fluorescence and phosphorescence.—Polarization of light.

The nature and origin of sound; sound waves; velocity in different media.—Loudness, pitch, and timber.—Measurement of tuning-fork vibrations; wave length; resonance.—Discussion of musical instruments and the musical scale.—The human voice; the ear; the phonograph; the telephone.

Topic (b).—Theoretical mechanics and its fundamental terms—force, stress, tension, pressure, strain, equilibrium, acceleration—explained. Discussion of motion, inertia, momentum, the moment of any force, the composition and resolution of motions and forces, the conditions of equilibrium—work and energy, and reduction to formulas.

Topic (c).—College preparatory physics:—The laboratory course required for admission to Harvard university.

THIRD YEAR.

Physical measurements (elective).—Four periods (45 minutes each) weekly for thirty-eight weeks.

Topics.—Measurement of the fundamental units, length, mass, and time, according to both British and metric systems, and computations based on these measurements.—Accurate measurements of dimensions of six brass solids, and computations of surface and volume. Discussion of errors and significant figures.—Exercises in ruling scales on both paper and steel.—Determination of sensitiveness of balance; methods of weighing; accurate determination of density; determination of the length of the seconds pendulum and the value of G.—Calibration of the thermometer, and accurate determinations of specific heat, latent heat, and co-efficient of expansion.—Measurement of curvature and focal length of lenses; angle of a prism; index of refraction; magnifying power of lenses and the study of the spectra.

FOURTH YEAR.

A choice of four electives, (a) Electrical measurements; (b) Electrical construction; (c) Applied mechanics; (d) Power plant practice—steam and electrical. Six periods (45 minutes each) weekly for thirty-eight weeks.

(a) *Electrical Measurements.*—Magnetic lines of force; determination of H and M.; use of tangent galvanometer; measurement of resistance by various bridge methods and also by direct measuring instruments; determination of specific resistance; verification of laws of divided circuits; measurement of electromotive force and current strength.

(b, c, and d) Application of principles already learned to practical work, with such new rules and formulas as may develop by practice in each of the three lines of applied science.

High School Physics; An Introductory Course.

By J. C. PACKARD, A. M., High School, Brookline, Mass

[Department of Science Instruction.—Abstract.]

We are living in an age of applied science. What effect is this tremendous fact producing, at the present moment, upon the courses of study in our schools and colleges? Our institutes of technology are flourishing as never before. Manual training schools are springing up with the greatest rapidity all over the country. The number of students enrolled in the scientific and technical courses of our correspondence schools is reckoned by the hundred thousand. But, and this is the significant fact, the physics of our secondary schools, to say nothing of the chemistry and the biology, is steadily giving way to old time subjects as Latin and algebra. What does it all mean? I can only hint at a partial reply.

The miracles of science are all about us. The school boy, intensely interested, comes to our laboratories with a thousand eager questions about dynamos, motors, X-rays, telephones, electric lights, wireless telegraphy, submarine boats, automobiles, and a host of similar things, pressing for an answer. What is the the result? In too many cases he is introduced at once to the difficult subject of exact measurement, required to make immediate use of such unfamiliar instruments as the diagonal scale, the vernier caliper, and the balance sensitive to a centigram; to report his results in terms of the metric system; to discuss errors, sources of error, percentages of error, averages and probabilities; to deduce laws, many of which he knew before, from data that cannot be made to prove anything and to apply these laws to a set of problems that have no apparent relation to his immediate scientific environment, or to the questions that he is so anxious to have answered. What wonder that the boy under such a regime so often becomes discouraged and that physics ceases to be attractive?

We must teach principles, but we must keep these principles in close touch with their applications. Illustrated lectures upon the applied science to be found in our schools, our streets, our houses, and our factories with just as much of the human element as can possibly be introduced, together with extracts from periodicals containing bits of the latest scientific news, should be a vital part of every course for beginners in physics. The method of research is not the method for the immature mind. Skill in manipulation of apparatus with a development of the "habit of mind" belonging to the "scientific method" may be the primary objects of instruction in our own mind, but they are side issues when viewed from the standpoint of the average boy. We must be content to attain these higher ends gradually as a final, not an immediate, result. We must remember moreover thru it all that interest is our greatest lever.

With these ideas in view we have introduced into our own school a course of applied physics, in which the laboratory waits upon the lecture and the discussion. It is intended for the average boy and girl who does not expect to go to college. Pupils preparing for Harvard pursue a distinct course by themselves. The arrangement has worked well. We should be glad if each pupil could be given an opportunity to take both courses, but this is impossible in the present crowded state of our curriculum.

[Details of course followed.]

High School Chemistry in Its Relation to the Colleges.

The City Superintendent's Point of View.

By SUPT. W. F. KUNZE, Red Wing, Minnesota.

[Summary of Discussion.—Department of Science Instruction.]

The high school has for its object the preparing of its pupils for the activities of life, and for the higher institutions of learning. To arrange the high school course so as to articulate with the needs of active life and the entrance requirements of colleges is the problem the city superintendent has to solve.

Chemistry has now been generally conceded a place and rank in the high school curriculum, but its limitations and mode of presentation are still much mooted questions; consequently there is a deplorable lack of unity in the aim and method of teaching chemistry. This state of affairs is due very largely to the colleges and universities. Their courses of instruction are widely divergent, and their entrance requirements are far from being uniform and definite. The instruction given in the colleges to those who expect to teach is in most cases identical with that given to those who intend to become chemists and analysts.

The teacher of chemistry needs less technical knowledge but a more thoro understanding of general chemistry. He must be imbued with a spirit for investigation. Furthermore, he should be able to point out the far-reaching relations of chemistry to commerce, industry, and daily life. In short, he should see to it that chemistry is the means of making the school life touch the real life at as many points as possible. We are hampered in not being able to secure enough properly qualified teachers of chemistry. The universities must come to the rescue and contribute their share to the solution of this problem, not by fixing uniform or hard and fast entrance requirements, but by devoting their energies to the task of furnishing us well-qualified teachers. With a supply of good teachers, the city superintendents will soon answer the question: What should constitute a high school course in chemistry? When that has been accomplished, the matter of entrance requirements will take care of itself; but until that is done, our high school work in chemistry will continue to be vague, haphazard, and aimless.

Disciplinary Value of Bookkeeping.

By PRES. ENOS SPENCER, Spencerian Business College, Louisville, Ky.

[Department of Business Education.—Part of Address.]

This is a busy, hustling, energetic era. Commercialism is fastened upon us. That it is an evil we will not admit. On the other hand, we know the world is growing more liberal, better, broader, and more humane. Superstition and ignorance are being displaced by enlightenment and reason. What is responsible for the world's advancement? Nothing more so than the application of the science of accounting, which alone makes possible commercial expansion and progress.

I would divide the school day thus: One hour for penmanship, not cramped copy-book drawing, but free muscular action bringing into play the large tireless muscles of the arm and producing ovals, straight lines, and curves from which alone a free, clean, legible handwriting can be obtained. One hour for reading and elocution, the reading not to be dry articles for elocutionary gymnastics, but free, fluent, natural reading of matter containing valuable information in history, science, and government. One hour for spelling and language; one hour for arithmetic and mental drill, not complicated calculations—especially thoro drill in that greatest of mind trainers, mental arithmetic; another hour for geography, history, physiology, hygiene and the principles of correct living. Between these hours intersperse recreation periods for physical culture.

Let this program be followed six days in the week. Children will not tire of a school properly conducted with mental and physical culture blended in such proportion that the one relieves the monotony of the other. Let the teachers teach more and examine examination papers less. Cut out the machinery and reduce the number of pupils to a teacher. See that *every* child is given thoro training in the fundamental branches before a dollar is spent on high schools or technical training of any kind.

Bookkeeping is not, however, a disciplinary study. All young men and young women should study it, but they should do so for its practicability. It is an essential in every-day life, no matter what our vocation. It is the province of the public school to furnish the child's disciplinary training by teaching the fundamentals. The rudiments must be mastered before the pupil is qualified to take up a technical subject like bookkeeping. Penmanship, English and arithmetic are the necessaries, and they must first be acquired. Furthermore, the pupil should have all the general educational training his circumstances will permit, but the last year of his school life should by all means be devoted to business training, and that, no matter what life work the student may have mapped out for himself.

Humors of all kinds are prolific of worse troubles. They may be entirely expelled by a thoro course of Hood's Sarsaparilla.

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Side Notes of the N. E. A.

Thirty thousand registered as members—only think of it!

A full report of the meetings of the National Educational Association will be published in THE SCHOOL JOURNAL next week.

Where next year? There was some gossip to the effect that Seattle would be the next meeting place. Definite announcement will be made as soon as the matter is settled.

The twenty thousand teachers from other sections of the country who have returned home from their trip to Boston will stand ready, the rest of their lives, to fight the false but widespread notion that New England people are cold, unsympathetic, and inhospitable. The loveliest and most conservative homes in and around Boston were thrown open to the teachers, and a number of the visitors, with tears in their eyes, expressed their appreciation of the welcome accorded them. Some 750 enjoyed the hospitality of Mr. Augustus Hemenway, in a steamboat excursion down the harbor to Nantasket, with luncheon and music at the beach. Receptions for from one to 300 guests were given by Mrs. Jack Gardner and Mr. Moses Williams in Brookline, by Mrs. Henry Whitman at Beverly Farms, and by many others. Boston teachers, publishers, and private citizens vied with each other in hospitality to the guests, and as a result everybody had a right good time.

About 10,000 tickets to special functions, social and otherwise, were distributed. It was the plan that each ticket should admit but one person. Those in charge found that so many strangers disliked attending the several functions alone, that the invitations were so arranged as to allow one ticket to serve for two persons. This is a point worth remembering in preparing for future meetings of the convention.

A series of receptions was given during the week by the Catholic Union. At the first of the series Miss Haley and Miss Goggin were the special attractions, the reception being given in their honor, to the Boston teachers, the members of the school committee, and others. The club house was beautifully decorated without, and brilliantly lighted within.

Many educational exhibits were prepared especially for convention week. A very timely exhibit was on view at the Boston normal school, the subject represented being school gardening. There were groups of photographs representing teachers and pupils in the gardens, there were diaries of work done, and lecture notes carefully written out accompanied by pencil drawings showing the impressions of the gardening gained by pupils.

Classes of children actually at work in the gardens connected with the school were a very practical element of the exhibit.

The special exhibition of the week in the Boston public library consisted of a collection of color prints of textile and other ornamental designs in the Berlin museum. The delicacy and charm of the originals was beautifully preserved in the prints.

School buildings in all parts of the city—public, private, technical, and college—were open for inspection, many of them containing exhibits of the work in general, or of some features of special interest. If any teacher left Boston unacquainted with its schools, it was his own fault.

Among the pleasant receptions and open houses tendered by Bostonians were those by Mrs. Lucia Gale Barber and her sister, Mrs. Mary H. Davis. In the parlors of the Somerset Miss Gertrude Edmund and the Lowell training school received several hundred guests.

Walking parties of 500 or more went daily from Beacon Hill to the North End, visiting such places as the State House, Park Street church, the old Granary burying ground, Faneuil Hall, and the Old South church. All carried note-books and all of them know more about Boston now than most Bostonians. Everybody visited the public library, the Museum of Arts, and a great many looked into Trinity, the Phillips Brooks church.

Concord was another place that everybody planned to visit. The teachers made their pilgrimages to this shrine by trolley or by train, at the rate of 2,500 a day.

The beautiful hospitality shown by the several publishing houses of Boston was appreciated and taken advantage of very generally by the visitors. The various methods of entertainment offered will be described fully in the school board number of THE SCHOOL JOURNAL to be issued August 15.

The almost perfect organization of the various local committees and the forces under them was generally commented on and generously praised. Certainly nothing like it has ever been seen in Boston before, and very few times anywhere else. There were committees for every necessary service and substitutes along all lines to provide for sudden incapacitations. Something of the methods employed may be of interest.

The reception committee had men at all the railroad stations and principal wharves to meet trains and boats—at each terminal was a "chief" with ten or fifteen men under him. From the Huntington avenue and Back Bay stations men were sent out to Providence or Worcester to meet thru trains and welcome the delegates. These advance agents talked with the newcomers, answering questions and giving out blanks for preliminary registration, so that by the time the train reached Boston all the passengers knew pretty well what they were to do towards getting settled. They made their way at once to the registration offices, then to the place where the accommodation committee clerks assigned lodgings, and from there to the great tent where they found the baggage and information headquarters.

The arrangement of the tent was most practical. At one end were baggage and information tables, while around the interior were ten sections corresponding to the districts of the city. The visitors found the section corresponding to the district in which they were to stay, and were there provided with a boy to escort them either to a car or to their lodgings, and to see that their baggage was forwarded.

Nearly 250 men and as many boys were on duty for the reception committee for some part of the day. Under the accommodation committee there were seventy-two assignment clerks, besides floor walkers, door keepers, hotel men and substitutes. A force of thirty young men and women were in the literature department, arranging the guide books, pamphlets, tickets and programs needed, while the printers supplied the latter at the rate of 10,000 a day for three days. Twenty-five people worked on the card catalog of members, getting the cards ready for the registration clerks.

The branch post office established for the accommodation of those attending the convention kept a dozen clerks busy from morning till night. The volume of mail exceeded, daily, that of many of the leading city stations, altho no business was done except the handling of letters and the sale of postage stamps.

The guide book written by Edwin M. Bacon, published by Ginn & Company, copies of which were supplied to all active members, is a work of art. It will be a joy forever to thousands of teachers and it will serve not only as a souvenir, but as the basis of geography and history lessons in many a school-room.

The Massachusetts state board of education issued a very valuable pamphlet for free distribution, on the

Massachusetts public school system. Some of the interesting facts regarding the history and advance of the old Bay State, as cited in the pamphlet, will be given in these pages ere long.

Of the general meetings and the meetings in general little needs to be said. With thirty thousand teachers in Boston, simply because the N. E. A. was there—teachers earnest, enthusiastic, anxious to imbibe new ideas from which their pupils might profit in the months and years to come—as a matter of course, every meeting of every kind was full to overflowing. At the first evening session great Mechanics Hall was crowded, the audience filling every available cranny. And the teachers got from the convention what they went for. Boston may feel well repaid for the strenuous efforts she has made in ministering to her guests, in the thought of the hundreds of thousands of girls and boys whose lives are going to be the richer for this beautiful week.

For more than fifty years the country has been educating the two sexes side by side in the public schools. The plan was, when adopted, confessedly employed as a matter of economy, for fifty or sixty years ago the education of girls was felt to be necessary as well as that of boys, and was undertaken with like means. In the period anterior to the one referred to the education given to girls had been imparted in separate schools; but in schools doubled in size economy caused them to be brought together in the same classes.

No small number of teachers protested against this at the outset; women teachers especially opposed the plan. After a half century of experiment it must be said that opposition has increased and not diminished. At the Boston meeting Pres. G. Stanley Hall voiced this opposition and his words are well worth most serious consideration. It must be understood that there is a general agreement that both sexes may properly be educated together in the kindergarten and the primary classes; probably a majority would favor co-education in the advanced classes (grammar school); the controversy is over the high school and the arguments will be equally valid against the college. A summary of Dr. Hall's views will be given in THE JOURNAL next week.

There was some murmuring last year at Minneapolis, by those of the rank and file, at the election of President Eliot—it was considered a triumph of the "college interest." Now the N. E. A. does not specifically represent the colleges. In many senses the colleges take slight interest in public education. The N. E. A. is representative of the public schools of the entire country.

The department meetings were uniformly well attended—in fact overflow meetings had to be arranged in connection with most of them. The kindergarten section was particularly popular.

No more interesting sight has greeted New York for some time than was afforded when the Old Dominion line of steamers landed in the metropolis one hundred teachers from Alabama, bound for Boston. They were under the lead of Superintendent Slaton, of Atlanta, and President Abercrombie, of the University of Alabama. The Alabama teachers were delighted to find on the "Priscilla" eighty-five teachers from Ohio, led by Superintendent Moulton, of Cleveland. Such sights will impress the public with the fact that the schoolmaster is indeed abroad in the land.

Supt. W. H. Maxwell has scored a good point for New York city. Every public school in the metropolis is to have active membership in the National Educational Association. This plan will insure the interest of every teacher in the city, and is worthy of all commendation.

Miss Haley did excellent service for the N. E. A. by her spirited opposition to a proposed amendment to the by-laws of the association. The proposition was made, fathered by Dr. Nicholas Murray Butler and supported by President Eliot, to place the selection of the nominating committee, now lodged with the state delegates, in the hands of the president. Miss Haley contended that this was centralizing the power too much, and that it gave even more power to the men as against the women than they now hold.

"This association," Miss Haley said, "is made up in large part of women and it is right that they should have a voice in the government of its affairs. If such a thing as this was brought up, at least one year's notice ought to have been given to the members of the association. It is a principle of the government of the United States that the primaries shall not be interfered with. How many of these men who want to take away the little power we have would submit to have the United States government or the state government interfere with the primary elections, even tho, as is well known, they are governed by rings and have only a small attendance of legal voters?"

After considerable discussion on both sides of the question, President Butler's motion was defeated, 127 to 43.

Honor is certainly due Miss Haley for her efforts in this matter. THE JOURNAL labored for this years ago and it was only after many efforts that the power was lodged "with the people." This year the attempt was made to return to the "one man power" method again.

The declaration of principles was reserved for the last general session. It was framed by the committee on resolutions and was presented by Dr. Nicholas Murray Butler. The principles will be given in full in a forthcoming number of THE SCHOOL JOURNAL. They covered the following points: (1) The Bureau of Education should be made an independent administrative department, such as were the Departments of Agriculture and of Labor before their elevation to cabinet rank. (2) The condition of affairs in Indian Territory, where three-quarters of the population are reported as being without schools, should receive the immediate attention of Congress. (3) The money compensation of the teacher should be sufficient to insure an appropriate standard of living. (4) State aid is to be regarded as supplementary to, and not as substitute for, local taxation. (5) The highest ethical standards of conduct and of speech should be insisted upon among teachers. (6) School buildings and grounds should serve as active agencies for educating the people as a whole. (7) The schools should bring up the young to reverence law.

The following were elected officers of the association for the ensuing year: President, J. W. Cook, of Illinois; vice presidents—Charles W. Eliot, of Harvard university; Edwin A. Alderman, of Louisiana; J. W. Searson, of Nebraska; William L. Prather, of Texas; George B. Cook, of Arkansas; Henry R. Sanford, of New York; George M. Smith, of South Dakota; H. Brewster Willis, of New Jersey; James A. Foshay, of California; F. B. Dwyer, of Ohio; Delos Fall, of Michigan; Ellor E. Carlyle, of Massachusetts. Treasurer, McHenry Rhoades, of Kentucky. A director was also elected for each state.

The result of the vast gathering at Boston of educators from all parts of the country will be to aid in raising educational ideas from the nebulous, indistinct state in which they now exist in the public mind, and to demand their recognition as among the great forces of the country. It is not to be supposed that a single teacher has learned anything of grammar, arithmetic, or geography, but a vast number have returned home, feeling that their work is of the greatest consequence. There will be criticism passed upon the addresses by the public press, but the teachers do not assemble to hear addresses, which are incidents needful to the assemblage. The great thing is that so large a number of teachers possess the enthusiasm which brings them together; in this way education is becoming a cause.

Geography Syllabus.

(Continued from last week.)

Syllabus in geography, to be used in carrying out the new course of study as arranged for the public schools of New York city.

Africa, studied with reference to South America as a type, and after the plan followed in the treatment of Europe and Asia, with less attention to detail. Desert regions and their causes; large river basins; study of those products which are exported to Europe and the United States; influence of European control and the introduction of modern systems of industry and transportation; spheres of European influence.

Aids.—Globe, maps, and pictures, and other illustrative material, and books of reference.

Note.—Special attention should be given to the meaning of maps and to the ability to read them. Physical, political, and industrial features should be marked on outline maps.

Grade 5B.

United States and other countries of North America; the United States in sections; Canada, Mexico, Central America, and the West Indies. Location, surface, climate; resources, industries and occupations; products; commerce; chief cities; status of the peoples. New York and the City of New York.

The Countries of North America.—Location and boundaries; coast line and bordering waters; surface—ridges, slopes, plains and river basins; climate and its effect on plant and animal life and on the characteristics and activities of the people; relation of the United States to the other countries of North America.

1. *Middle Atlantic States*, as a group, following a causal series: (1) Location, climate, surface, drainage and waterways; general direction of groups of lakes and rivers as determined by elevation and slope; value of the water courses to soil, navigation, and manufacturing industries; names of important rivers. (2) Resources: soil, forests, mineral deposits, fisheries. Special consideration should be given to such as are important because of the great abundance and commercial value of their products. Resources of forests, mines, and quarries should be learned by observation of specimens brought to the class-room of the pupils when possible. Such materials should be associated with the objects made from them and with simple explanations of the processes of manufacture. (3) Industries and occupations as related to physical conditions (sailor, fisherman, farmer, miner); urban and rural occupations contrasted; agriculture, grazing, lumbering, fishing, mining, quarrying, and manufacturing. (4) Products; animal, vegetable, mineral, manufactured [see suggestions under (2)]. (5) Commerce; routes as affected by physical conditions and by industries; means of transportation and communication; great trunk lines; exports and imports. (6) Chief cities; manufacturing and commercial centers; position and importance as determined by physical conditions. Suggested standards for selection of cities to be considered are (a) capital, (b) the most important city of the state, (c) centers of great industries, (d) great sea or lake ports. (7) Status and customs of the people; education; literary and artistic attainments; names and locations of educational institutions of national reputation; scientific advancement as manifested in discoveries, inventions, and engineering.

II. New York State. Location, surface, drainage; comparative size and importance; resources; industries and occupations; products; commerce; canals and railroads; manufacturing and commercial centers; advantages and location; social development; educational centers.

III. New York City as an industrial and commercial center; physical conditions determining its growth and importance; means of transportation and communication; public works, parks; public schools, and other public institutions; great mercantile, financial, and manufacturing concerns. Leading factors determining public improvements (see 4A). Study of New York harbor.

A study of the following groups of states following the causal series, as in the case of the Middle Atlantic States:

IV. New England States
V. Central States
VI. Southern States
VII. Mountain States
VIII. Pacific States
IX. Other Countries of North America, briefly treated.

By way of review, pupils may discuss all of the steps as they relate to a given group, or one step applied to each of the groups in turn.

Aids.—Globe: outline, commercial, United States Geological, Survey. Topographic and census maps; weather charts, pictures, photographs, lantern slides, projections, and other illustrative material: collections of minerals, rocks, soils, seeds, and manufactured articles. Books of reference on geography, history, biography, travel, natural history; magazine articles, newspaper clippings, almanacs of the New York dailies, railroad and steamboat guides and official reports.

Note.—Comparisons, contrasts, correlation and causal relations should be considered at every step possible. Special attention should be given to the meaning of maps and to the ability to read them. Physical, political, and industrial features should be marked on outline maps.

Grade 6A.

South America and Europe.—Physical features. Leading countries; location, surface; climate; resources; industries and occupations; products: commerce; chief cities; status of the peoples.

South America.—Location in heat belts, in latitude and longitude, and with reference to oceans and to North America; ratio of size to other continents and to the land surface of the world; formation of harbors; bordering waters. Surface diversities with study of a cross section, east and west, north and south; comparison of high and low lands in extent, elevation, and drainage with those of North America; principal river systems and the extent of their basins; effect on soil and commercial development as determined by width, depth, and fall; climate and its effects on plant and animal life, and on the characteristics and activities of the people. The countries, comparative importance, capitals, trade-relation, and comparison of this continent with North America and of the leading countries in South America with the United States.

Special attention should be given to Argentina, Brazil, Chile, and one tropical—Andean country, in accordance with the following causal series: (1) Location climate, surface, drainage, and the main waterways; effects of climate and drainage on soil and industrial development; coast line; borderering countries; area compared with that of other countries, and with that of a selected state or group of the United States, taken as a standard. (2) Resources; soil, forests, mineral deposits, fisheries; relation of vegetation to elevation, drainage, rainfall, and temperature. (3) Industries and occupations as determined by physical conditions; agriculture, grazing, lumbering, fishing, mining, quarrying, and manufacturing. (4) Products: animal, vegetable, mineral, and manufacture. (5) Commerce: routes as affected by physical conditions and industries; means of transportation and communication; exports to the United States; (6) Chief cities, commercial centers. (7) Status of the peoples; habits and customs; government.

Europe.—This continent should be studied after the same general plan followed in the treatment of South America. The following countries should be treated as fully as their relative importance demands, following the causal series as above: I. British Isles; II. German Empire; III. France; IV. Russia; V. Austria; VI. Italy.

The remaining European countries should be treated very briefly as to location, products, cities, government.

Aids and Note as in 5B.

(To be continued.)

Experiments.

Learn Things of Value.

Where one has never made the experiment of leaving off coffee and drinking Postum it is still easy to learn all about it by reading the experiences of others.

Drinking Postum is a pleasant way to get back to health. A man of Lancaster, Pa., says: "My wife was a victim of nervousness and weak stomach and loss of appetite for years and was a physical wreck; altho we resorted to numerous methods of relief one of which was a change from coffee to tea, it was all to no purpose.

"We knew coffee was causing the trouble, but could not find anything to take its place and cure the diseas s until we tried Postum Food Coffee. In two weeks' time after we quit coffee and used Postum almost all of her troubles had disappeared as if by magic. It was truly wonderful. Her nervousness was all gone, stomach trouble relieved, appetite improved and above all a night's rest was complete and refreshing,

"This sounds like an exaggeration, as it all happened so quickly, but we are prepared to prove it. Each day there is improvement for the better, for the Postum is undoubtedly strengthening her and giving her rich red blood and renewed life and vitality. Every particle of this good work is due to Postum and to drinking Postum in place of coffee." Name given by Postum Co., Battle Creek, Mich.

Ice cold Postum with a dash of lemon is a delightful "cooler" for warm days.

Send for particulars by mail of extension of time on the $7,500.00 cooks' contest for 735 money prizes.

The Educational Outlook.

Alabama Teachers' Association.

BIRMINGHAM, ALA.—The meeting of the State Teachers' Association held here, June 16-18, was unusually successful, both in numbers and in interest. There was hardly a district in the state but had at least one delegate present.

In welcoming the teachers Mayor Drennen, of Birmingham, said: "I hope to see the day come within the near future when the clause in our new constitution providing for increased public school funds will be put into effect, not simply to be a provision of our constitution, but to be a law carried into effect."

The address of President M. C. Wilson, of Florence, was strong and helpful. The entire speech was too long to be reported here, but its general character can be judged by the following selection:

"About a year ago there came to Alabama a pulse of the great wave with which the Southern educational movement has swept over the country. Last winter, in the state's capital, were gathered, for the first time in the history of the state, almost all the county, town, and city superintendents, for the earnest discussion of educational matters and for consultation with experienced educators, over plans and methods for making better schools. Perhaps not since the convention of 1861 have Alabamians come together with such zealous interest in a cause—an interest so deep and heartfelt that it manifested itself in no form of harangue, but in a quiet, determined vow on the part of each superintendent to go back home and do his utmost to spread the gospel of education he had heard preached in Montgomery and to communicate the enthusiasm he had gained there to his neighbors at home.

"These superintendents are keeping that vow. The patient, earnest teachers, who, a few years ago, were almost in despair, have all at once awakened to find a morning bright with promise. The rift in the cloud is growing wider and wider. The legislature has already passed measures looking toward the improvement of the schools and the protection of the teachers. It may be trusted to do still more before its final adjournment. The public conscience toward public education is beginning to be quickened. Direct antagonism to free education is retreating farther and farther from the centers of population. Communities are beginning to discriminate between trained and untrained teachers. The profession of teaching is becoming more and more regarded as honorable. The outlook is hopeful, and it is fitting that this body of teachers, representing every kind of educational interest in Alabama, should, in their meeting in Birmingham, where many of the most important movements toward better education have had their beginning and their early fostering care, pause a moment to celebrate appropriately what we have a right to hope is the dawning of an era of advancement in education."

The topic, "Are Our Public Schools Fulfilling Their Mission as Character Builders?" was introduced by Supt. H. C. Gilbert, of Florence, in an interesting paper. G. W. Brock, of Opelika, J. M. Dill, of Bessemer, and Prof. W. H. Naff, of Birmingham, followed with brief discussions of the same topic. The afternoon of the first day was devoted to meetings of the various round tables.

CONSOLIDATION.

Mr. Chappell Cory, who led the discussion on consolidation of rural schools, on the morning of June 17, threw a bombshell, metaphorically speaking, when he said: "I do not believe in consolidation in any large way. It behooves us rather to cultivate the local idea to its extremest limit. In the future, when better roads are enjoyed and the people more thoroly awake on the subject, consolidation may be effected. Money is the chief thing. Teachers are underpaid. To get money means local taxation. The national treasury is closed for many years to come, while the State vault is hopelessly shut. Local taxation cannot be accomplished in a day, however worthy the object in view; but once let the rural school problem be thrown into the light of discussion and some remedy for the present evils will be discovered."

The subject was thrown open to the convention and it aroused heated discussion, the final consensus of opinion being, however, in favor of consolidation. The principal address before the county superintendents' meeting, in the afternoon, was from the president, J. D. Humphreys. He said in part:

"The conscientious superintendent cannot by any device or excuse get away from the moral and civic responsibility phase of his office, and if any one thinks that he can, it were better for him and better for the county that he never qualify for the job. It is verily true that a public office is a public trust, and howsoever great may be the provocation to be sometimes elastic in the line of duty, the mark must be toed and the sacrifice made.

"The pupil cannot be expected to attain a higher standard of perfection than that of the instructor. The teacher is at least the mainstay and hope of our system. Every encouragement should be given to the development and maintainance of our normal schools. Some men and women have a natural tact and adaptability for teaching, but the great majority must have the science and theory of pedagogy taught them, and the better the training school for the teacher the better the product will be evolved from it. And the best teachers should not always be sent to the best schools. There are many townships in Alabama where the material and opportunity are at hand to make a splendid school and the reason that success is not attained is because of the incapacity or indifference of the teacher. The waste place can be made to blossom with virtue and intelligence if the right agent is sent to it to revive and inspire."

THE BANQUET.

For the evening of June 17 a great banquet was arranged, at which there were present the governor of the state, the secretary of state, the nine members of the state text-book commission, adjourned from its meeting in Montgomery especially to be present, the superintendent of education, the presidents of eight Alabama colleges, including both state institutions, twenty-five county superintendents, several notable visitors, and more than three hundred Alabama educators and teachers.

Among the speakers were Prof. I. W. McAdory, of Birmingham; H. J. Willingham, of Wetumpka; Mr. J. Joseph, and Mrs. S. H. F. Tarrant.

Dr. J. H. Phillips made an interesting address on the "Teacher," saying that the right kind of a teacher summarized all the advantages of education. He spoke eloquently of the school workers' function in life and said that in the amount of contribution to the value of a state none was more powerful than the teacher. I. W. Hill, of Montgomery, spoke on the "Function of the State Superintendent." He promised his support to the cause of education and hoped that the time was not far distant when no child in Alabama would be beyond the sound of the school bell. He spoke of the two bills now in the House; one for the monthly payment of teachers' salaries and the other for local taxation for rural schools. These, and all other things educational, he promised to foster.

J. W. Abercrombie, president of the University of Alabama, responded to a toast on that institution, by tracing its progress and development. He recalled the great men gone from its walls and said a large part of the officials of the state were graduates.

Charles C. Thach, president of the Alabama Polytechnic Institute, in Auburn, congratulated the association on the splendid meeting and said it augured well for the future. Unity in education, he said, was the chief need in Alabama. Auburn was ever ready to join her sister university in the common good. The public schools must be appealed to, and in this regard the teachers were the basic structure of Alabama education. At Auburn they would teach the boy not only to think, but to act. Great prospects lay in the future.

The officers for the coming year are: Pres. C. B. Glenn, Birmingham; Sec'y. J. W. Dangette, Jacksonville; Treas. W. E. Striplen, Gadsden.

American Schoolships.

The St. Mary's and the Saratoga are two of the three American schoolships on the Atlantic coast intended exclusively for nautical schools to train boys for the merchant marine. The Saratoga is controlled by the state of Pennsylvania and the state of Massachusetts controls the Enterprise; but the St. Mary's is maintained by the board of education of the city of New York. The nautical school on the St. Mary's is under the supervision of the United States—that is to say, the captain is a detailed officer of the United States navy. The school is intended for boys who wish to learn navigation and seamanship, combined with a high school course of studies, so that they may be fitted to engage as officers in the merchant marine service. After a student has completed two cruises and passed his examination he receives a certificate of graduation, which qualifies him to fill the position of quartermaster or junior officer on the great transatlantic steamship lines. —*St. Nicholas* for July.

The Teachers Needed.

The graduating exercises of the Lowell (Mass.) training school were notable for the presence of ex-Gov. Charles H. Allen, of Porto Rico, and his associate in his work in that island, Dr. M. G. Brumbaugh. The principal address of the occasion was given by Dr. Brumbaugh.

To the graduates Dr. Brumbaugh said that if they were to come to him for positions, and he could ask them a few questions, he would ask them, first, "Are you a good eater?" No one, he said, ought to take hold of a room full of children, and try to hold them down, who could not eat three hearty meals a day and be hungry all of the time.

Another question would be, "Are you a good sleeper?" No boarding house bell or yell should call a teacher from her sleep. She should always sleep as long as it tastes good. A great many people feel that our teachers and pupils are overworked. As a matter of fact if a teacher or a child would sleep the requisite number of hours, they would be capable of performing the necessary amount of work in the school.

Then he should ask, "Are you a good laugher?" The teacher who cannot laugh with the young children and be happy with them, would better never enter a school-room.

Finally, he would ask, "Do you know how to tell a story well?" It is the hun-

ger that you create, instead of the appetite you satisfy, that makes the successful teacher.

Hartford Female Seminary.

The fiftieth anniversary of the graduation of the class of 1853, Hartford Female seminary, was celebrated this year. The school was started in 1823 by the Misses Catherine and Mary Beecher. In 1827 a charter was obtained and the school was incorporated. Good Will hall, planned by Miss Beecher with the assistance of Daniel Wadsworth, contained a study room for 150 pupils, a lecture room, and six recitation rooms. It was completed in the fall of 1827.

In August, 1832, John P. Brace became principal, occupying the position thirteen years. Other teachers were temporarily acting principals for three years, until Miss Frances A. Strong was chosen principal, which position she held until her death in April, 1853. After her death it was continued under several principals and with varying success until the property was sold to the Good Will Club in 1888.

Rural Grammar Schools.

Hernando county, Florida, has under consideration a plan for forming four rural grammar schools. A law was recently passed granting $200 a year for three years to schools organized under its provisions. To obtain the money appropriated by the legislature, grammar schools must run eight months in the year, teach an eight grades course, be properly equipped and employ two or more teachers for the full term.

The grammar school system will increase the term of school two months, and save $1,108 to the county alone in the salaries of teachers.

Here and There.

The sum of three million dollars is to be the sum represented in the buildings and land of the secondary schools connected with the University of Chicago, so President Harper announced at commencement time. The buildings soon to be erected for the school of education and the manual training school will cost more than $600,000. Other buildings for the same purposes will cost a like amount.

The University of Zurich, Switzerland, will offer a number of courses for teachers during the summer term, from August 3 to 15. The work will include courses in the various sciences, in the German and French languages, in psychology, and in history and literature. Dr. Locher is director of the educational instruction, and Dr. Zollinger is the general secretary.

In Van Brunt woods, near the city of Cincinnati, Cunningham hall, the Van Wormer library, Technical and Engineer hall and other new buildings of the University of Cincinnati were dedicated, June 20, with elaborate ceremonies. Pres. Howard Ayres delivered the dedicatory address.

Miss Helen Keller has just finished her examinations for the year at Radcliffe college of Harvard university, and has gone to gain well-earned rest. She and Miss Sullivan, her teacher, have a cottage at Wrentham, Mass. It has been intimated that Miss Keller has other literary plans that interest her quite as much as her autobiography, which is now a very widely-discussed book in two hemispheres. She recently thanked the Society of American Authors for electing her to membership, and, as usual, the letter was beautifully and correctly written by herself on her own typewriter and signed in her own handwriting.

Professor Henry B. Fine, Dodd professor of mathematics, has been appointed dean of Princeton university. Professor Fine was graduated from Princeton in 1880. After graduation he received a fellowship in experimental science. He received the degree of Ph. D. from Leipsic in 1885. That year he became assistant professor of mathematics in Princeton, and soon afterwards was made full professor. He is the author of "The Number System of Algebra," and his "College Algebra," now in preparation, will be published next winter.

Dr. Carl F. Kolbe, professor of modern languages in Buchtel college, Akron, Ohio, has just closed his fiftieth year as a teacher.

Miss Elizabeth Hutton, of New Castle, Pa., was made the recipient, in June, of a magnificent chest of silver from the Dana Hall school, Wellesley, Mass. The present was made in recognition of prompt service rendered by Miss Hutton on the night of December 6, 1902, when the dormitory was threatened with destruction by fire, imperiling hundreds of lives.

CLINTON, N. Y.—Among the recent donations to Hamilton college was a gift of $100,000 from Andrew Carnegie.

FULTON, Mo.—Mr. H. C. Hurd has resigned his place as teacher at this place and is succeeded by Mr. R. G. Hale.

The National Geographical Society of Washington has announced that the eighth geographical congress will be held in that city in September, 1904. The last congress was held in Berlin in 1899, when there were about three hundred delegates present. The representation at Washington will probably be considerably smaller, as there are only about ten geographical societies in this country, and some of those are hardly more than a name. Berlin, on the other hand, is surrounded by such societies. There is the Royal, of London, with 4000 members; the Paris society, the Berlin, the Scottish, and the Roman—all of them flourishing institutions.

New England.

MALDEN, MASS.—Mr. Henry D. Hervey, of Pawtucket, R. I., has been elected superintendent of schools, to succeed Mr. George E. Gay, resigned. Mr. Hervey was graduated from Denison university, Granville, O., in 1889, and took the degree of A.M. in 1896. He has pursued special courses in Latin at Chicago and in Northwestern university, and at other places; and also special courses in pedagogy. He has taught the classics both in preparatory schools and in college, and also history. He was for two years principal of the high school at Lakewood, N. J., and since 1898 he has been superintendent of schools at Pawtucket.

WESTWOOD, MASS.—Another school for girls is to be located in this town and Norwood, upon the King Gay farm, to be known as the Henry O. Peabody School for Girls. The will of the late Henry O. Peabody, inventor of the Peabody rifle, gives nearly the whole of his estate, believed to be worth at least $100,000, into the hands of trustees, to found this school. Its purpose shall be to "furnith instruction to girls by teaching the various branches of art, science, and industry best calculated to enable the scholars to acquire an independent livelihood." The entire management of the fund and the building of the school is vested in a board of trustees, three of whom are now members of the Boston school board, and they are to allow the fund to accumulate until in their view it has become sufficient for the purposes of the school. Then they are to build suitable buildings and open the school.

BOSTON, MASS.—A matter which came up before the last meeting of the school board is of general interest, tho it is principally a moral question. It is whether teachers and supervisors have the right to do educational work outside of Boston, or whether the city may require their entire services. Very often teachers and school officers have been away for one or two days at a time to give some lecture either at an educational gathering or before some institution, and the city has been considered the gainer thru influence and reputation. But when a teacher is asked to be away for two entire weeks to teach in another city, the case seems different. And now it is announced that one of the supervisors is to give a course of lectures in Wellesley college. How this can benefit the city it is hard to discover, and it seems a good time to decide the question. Action upon it was postponed until September.

NORWICH, VT.—Rev. Allan D. Brown, LL.D., president of Norwich university, has resigned to take effect at the end of this year. Personal reasons have led to the resignation, but Dr. Brown will remain and carry on the work until his successor is elected.

MIDDLEBURY, VT.—Middlebury college has joined the ranks of the separate colleges. A woman's college has been established, and henceforth the old college will be for men only. For a time the same instructors will serve in both colleges.

Prof. H. R. Lang, of Yale university, has been made, by the king of Portugal, a commander of the Order of Santiago, for his service to Portuguese letters. Professor Lang, who is eminent as a scholar in Portuguese literature, received the insignia of the order thru the Portuguese minister at Washington.

A three-days' celebration of the two-hundredth anniversary of the birth of John Wesley was held in connection with the commencement exercises of Wesleyan university, Middletown, Conn. The principal addresses were delivered by Prof. C. T. Winchester, on "John Wesley, the Man," and by Pres. Woodrow Wilson, of Princeton. A unique feature of the celebration was the campus illumination and rally, in which about 1,000 students and alumni took part.

NEW BRITAIN, CONN.—Mr. Benedict, the principal of the high school, has resigned to accept the principalship of the Utica Free academy, N. Y.

Recent Deaths.

Mr. Warren E. Eaton, master of the Harvard school, Charlestown, died on July 2 at his home in Reading. He had been the master for thirty-six years, during which the population of the section in which the Harvard school is situated has changed, being made up largely at present of foreigners.

Mr. Eaton was a native of North Reading, and was educated in Billerica and in Phillips academy, Andover, and he was graduated from Tufts college in 1864. He taught for one year in Quincy, whence he entered the Prescott school, Charlestown, as submaster. He was later promoted to the head of the Harvard school. He was greatly interested in historical matters, and at the time of the 250th anniversary of the town of Reading in 1894, he prepared the principal part of the historical sketch.

ATKINSON, N. H.—Mr. Wm. C. Todd died at his home in this town on June 27. He was for some years principal of the Girls' High school, Newburyport, Mass., and later, engaging in business, he acquired considerable wealth. Several times he has made special gifts to the libraries of Boston and other cities.

George L. A. Martin, for thirty-eight years connected with the public schools of Brooklyn, died very suddenly of apoplexy, July 7. He was sixty-three years old, and during the last school year was principal of P. S. No. 37, Brooklyn.

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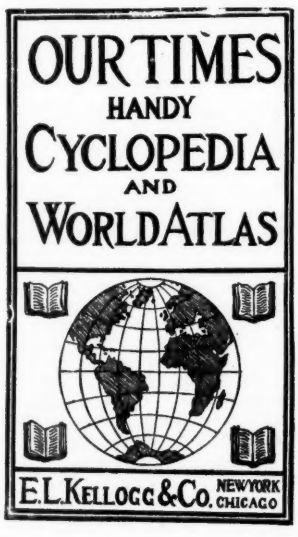

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The Magazines.

After a feverish rush to the cities the American people are getting back to the soil, and like the fabled Antæus they will renew their strength when they again come in contact with their mother Earth. It is for these lovers of green fields and pleasant woods that the beautiful magazine *Country Life in America* is published by Doubleday, Page & Company. The July number is especially attractive. It contains among other articles, the following: "The New Ideals in the Improvement of Plants," by L. H. Bailey; "The Scotch Collie," by M. Mowbray Palmer; "The Renaissance of Tennis," by Charles P. Sawyer; "Home Weaving in Country Houses," by Candace Wheeler. These and other articles are illustrated without stint, and it is safe to say that this issue more than maintains the reputation of this splendid periodical.

The feature of *Scribner's Magazine* for July that first attracts attention is the beautiful frontispiece by Maxfield Parrish, "Aucassin Seeks for Nicolette," reproduced in colors. It is companion to the poem "Romance," by A. M. Davies Ogden. Next comes Gen. John B. Gordon's graphic and splendidly illustrated article on "Gettysburg." "The Canadian Rivermen," by Arthur Heming, is an article that describes the dangers run by these hardy men.

The fiction consists of "The Flying Colleen Bawn," by James B. Connolly; "The Little Shepherd of Kingdom Come," Chapters XXIV-XXVI, by John Fox, Jr.; "In the Open," by Mary R. S. Andrews, etc. The sixth of the series of papers on the administration of the civil government is on "The War Department" and is by Charles E. Magoon.

In consequence of the late successful performance of Shakespeare's love tragedy, "Romeo and Juliet," in New York, and the interest this aroused, the critical comment by Arthur Symons, and the pictures by Edwin A. Abbey, R. A., in *Harper's* for July are very timely. One of the pictures is a colored one representing the death of Mercutio. Dr. Lounsbury, of Yale university, writes of "The Standard of Pronunciation in English," and Dr. Chamberlain, of Clark university, of "The Survival of Human Personality." Fiction is contributed by Margaret Sutton Briscoe, Philip Verrill Mighels, Maud Stepney Rawson, Will N. Harben, and others, and verse by Frank Dempster Sherman, Madison Cawein, Laurence Housman, Mildred Howells, Louise Morgan Sill, John Vance Cheney, D. Mackellar, C. Rann Kennedy, Gelett Burgess, and Louise Betts Edwards.

In the *Cosmopolitan* for July, Richard Le Gallienne has something interesting to say in regard to the love affair of Shelley and Mary Godwin. Among the other articles are "Suburban Life in America," by Waldon Fawcett; "King Menelek of Abyssinia," by William T. Stead, and another installment of the series on "Captains of Industry."

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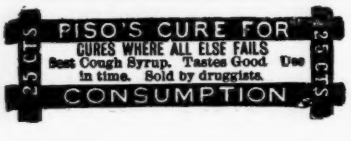
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The latest project for translating Booker T. Washington's autobiography, "Up From Slavery," has been undertaken by Cleopas Kunene, in Natal, South Africa. He has applied to the publishers, Doubleday, Page & Company, for the right to translate it into the Zulu language for the benefit of those who read the language and are trying to better the condition of the masses of their countrymen, who, the author says, "are still lolling and weltering in darkness and ignorance and poverty."

Ernest Harold Baynes, the well-known Nature writer, contributes an instructive article on "American Reptiles," to the July *Woman's Home Companion.* Every nature lover should read it.

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